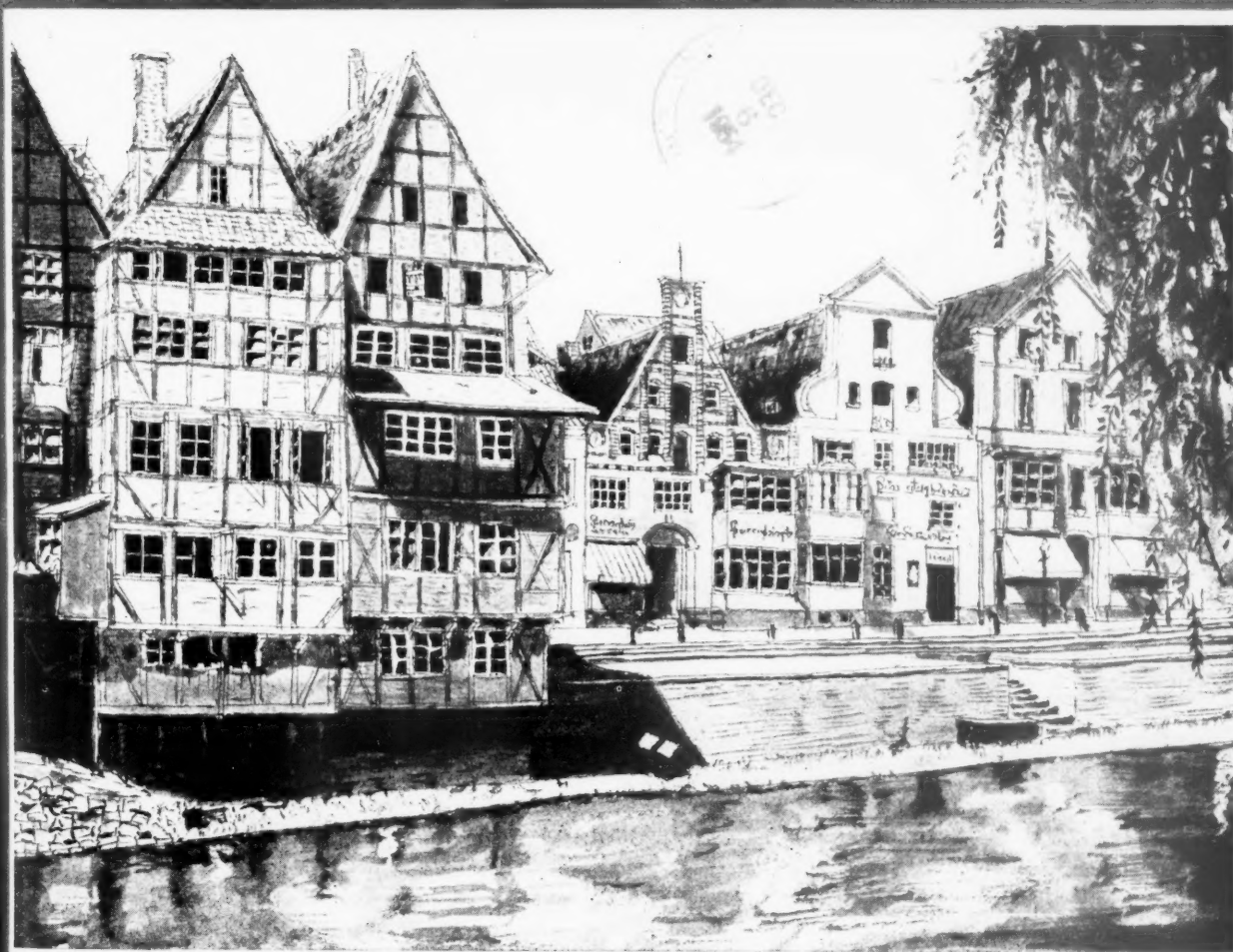


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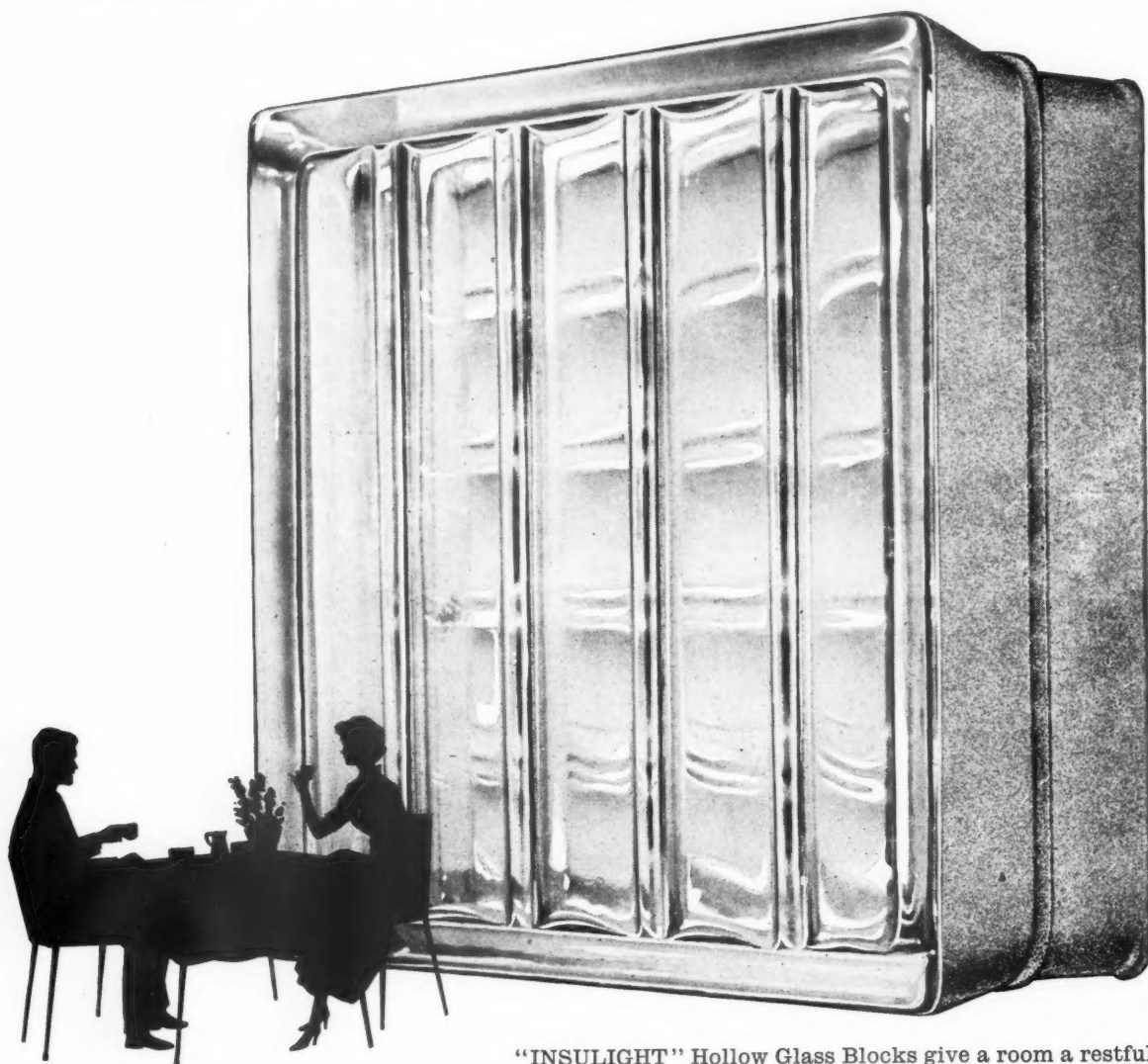
# THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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Lüneburg, Germany. From a sketch by S. A. Roe [A]

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# THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

THIRD SERIES VOLUME SIXTY-TWO NUMBER ONE TWO SHILLINGS AND SIXPENCE  
66 PORTLAND PLACE LONDON W1 TELEPHONE LANGHAM 5721-7 TELEGRAMS: RIBAZO WESDO LONDON

NOVEMBER 1954

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## 'Building in Concrete' Exhibition

The 'Building in Concrete' Exhibition was opened on 20 October by the President R.I.B.A., Mr. C. H. Aslin, C.B.E. He said how happy he was that the Institute was housing this exhibition, believing as he did that our salvation lay in the association of everybody who had anything to contribute to building.

The President commented on the fact that the exhibition comprised not only the vast structures which he had expected to find in it but also a number of little ones, and not only structures which could not be built in any other medium but those in which concrete was competitive with other materials. He paid tribute to the assessors—led by Mr. Howard Lobb, C.B.E. [F]—who had carried out the tremendous task of selecting the 280 exhibits that formed the exhibition out of the 2,600 items submitted, and welcomed the proposal of the 'Critics' to deal with the exhibition on their radio programme. They might not, he said, say the right thing about it—members will since have had an opportunity of deciding for themselves on this point!—but that didn't matter. The important thing was that anyone interested in concrete in any way should know of the exhibition.

Mr. M. G. Cowlishaw, Chairman of the Joint Committee on Structural Concrete, thanked the President, the Council and the Institute staff who had organised the excellent display, and also made grateful reference to the work of the assessors.

## The Appeal for St. Paul's Cathedral

The Dean and Chapter of St. Paul's are appealing for a capital sum of £400,000 for essential repair works and a continuing annual additional income of £20,000. In the JOURNAL of December 1948 we described the war damage and the works of repair which had been done and which remained to be done. The chief item of the latter is extensive reconstruction in the north transept into which a large high explosive bomb fell in 1941.

While a substantial part of the cost of war damage repairs will be covered by the Commonwealth Memorial Fund, the American Memorial Fund and by war damage payments, a further £75,000 will be required to complete all the work involved. The cathedral's lighting system, some of it 50 years old, is decrepit and must be replaced at a cost of £80,000. Cleaning and repair of stonework and monuments, renovations or replacement to chairs, books, hangings and other equipment, repairs to the heating system and treatment of roof timbers for beetle will require £90,000. The building housing the choir school is scheduled for demolition under town planning; a new building will cost £150,000. Wren's Chapter

House was destroyed in the fire raid of 29 December 1940; when this is rebuilt, £5,000 will be needed to equip it.

Like Westminster Abbey, St. Paul's has a fixed income. Either economies must be made and the fabric of this most famous building by Britain's most famous architect will suffer, or the money, both capital and income, must be found. There is no need to dilate on what St. Paul's means to London and the Commonwealth, nor on its unique position in English architecture, and we are therefore glad to help publicise the appeal. Donations should be sent to The Dean, St. Paul's Cathedral, London, E.C.4, cheques being made payable to 'The St. Paul's Cathedral Campaign'. Deeds of covenant for seven years are specially advantageous because tax on the gift can be recovered.

## Gold Coast Society of Architects

Members practising in the Gold Coast have joined together to form the Gold Coast Society of Architects, and are availing themselves of the guidance of the R.I.B.A. in regard to its constitution and activities. When the Society has been in existence for a sufficient period to become firmly established, it is understood that it will seek formal alliance with the R.I.B.A., and such an application would naturally receive consideration by the Council.

The Acting Honorary Secretary of the Society is Mr. Arthur Lindsay [A], P.O. Box 1343, Accra, Gold Coast.

One of the functions of the Society is to provide information on local conditions to members who may be considering taking up appointments in the Gold Coast, and any who are interested are advised to write to Mr. Lindsay.

## The Henry Jarvis Hall

Following complaints at the 1954 Annual General Meeting about the lighting of the Henry Jarvis Hall and the silhouetting of 'the platform' against a white background, the Finance and House Committee have had improvements made. The intensity of the lighting has been increased and spotlights set flush with the ceiling provide radiance to the faces of 'the platform'. The most noticeable improvement, however, is the covering of the white lantern screen with a rich green curtain and warm brown side curtains. The colours make a pleasant background and the vertical lines of the curtain folds contrast with the horizontal lines of the dais and panelling. This work was completed in time for the Inaugural Meeting, but the provision of light-coloured blinds at the windows to increase the reflection values from the lighting troughs below is also under consideration.



## A.B.S. Activities

The Christmas Appeal by the President of the Architects' Benevolent Society is issued with this JOURNAL. The money it brings in goes to help those in need. There are many architects and assistants who have had to give up work because of ill-health, several young widows who have children to educate and many elderly architects and widows who no longer have relatives to care for them and who live in uncomfortable, cheerless rooms. As the profession grows larger, so there are more who need help. The funds of the Society are continuously stretched to the limit. Half-a-crown from every architect would greatly ease the tension. This year many more Allied Societies than before are making special efforts to help the Appeal. May we suggest that in each office one person makes himself or herself responsible for collecting the money and sending it in, either through an Allied Society or direct to the Secretary of the A.B.S.

The A.B.S. Annual Ball is in aid of the Centenary Fund for Old People's Homes. This year it is being held at Grosvenor House, Park Lane, on Thursday 9 December, under the auspices of the President, Mr. C. H. Aslin, C.B.E., and Mrs. Aslin.

The move to Grosvenor House has been necessitated by the ever-growing demand for tickets in recent years. With the increase in space, the Ball Committee are expanding the number and variety of side shows to interest and amuse the greater number of architects and their friends who it is hoped will attend. This year there is to be a 'theme'—Ancient Egypt—which will be portrayed, doubtless with archeological inexactitude, in murals and mobiles and on columns and capitals. This decoration is being provided by the students of five London schools of architecture—the Architectural Association, the Bartlett, the Northern Polytechnic, the Regent Street Polytechnic and the Hammersmith School of Architecture. They are also designing and making the special table decorations which in past years have been so entertaining a feature of the A.B.S. Ball.

A poster competition open to these schools of architecture has also been held. The winner is Mr. I. P. Rennie of the Regent Street Polytechnic; the design of Mr. P. C. K. Clinton of the Architectural Association School has been highly commended.

Donors of prizes have been even more generous this year than before. Altogether the 1954 Ball seems likely to be a greater success than in previous years and to provide a substantial sum for the Homes. Tickets, which are 45s. each and include supper, are obtainable from the Hon. Organising Secretary, The A.B.S. Ball, c/o C. J. Epril [F], 55 Pall Mall, S.W.1. Dancing will be to Sydney Lipton's Ballroom Orchestra. Members are advised to book their tickets without delay.

Sales of the special A.B.S. Christmas Cards, which were illustrated in the August JOURNAL, are going well. The last day on which orders for overprinting names and addresses of senders can be accepted is 1 December.

## As Others See Us

Members who met Mr. John Stetson, official delegate of the American Institute of Architects, and his charming wife at the Torquay Conference will be interested to learn that they found the proceedings and functions both pleasurable and enjoyable. Mr. Stetson writes in the A.I.A. JOURNAL: 'The paper titled "Materials and Techniques" was very thorough and more interesting than those we usually produce. The discussion proved beyond a doubt that the British architect is anything but stuffy. Our meetings need the wit and humour therein produced.' Of the Conference dinner he said: 'This formal dinner far exceeded any it has been my pleasure to attend at our Conventions. The speeches were short, and the toasts often.' He concludes his report with, 'It was a pleasure to serve as a delegate of the A.I.A. and it is highly recommended that all and any American architects pay a visit to the R.I.B.A. building if and when in London'.

## The B.R.S. Digest

We regret that the Digest had to be omitted from the October JOURNAL owing to late delivery of the copies by the Stationery Office. We were unable to print a statement about this because we did not know that the Digests would not arrive in time until after the JOURNAL was being printed.

By arrangement with the Building Research Station, the October Digest will be issued with the December JOURNAL in addition to the Digest for that month.

## The Library Group

During the present session the Library Group has held two meetings. On 12 October Mr. Charles Waite, who has repaired and rebound many of the more valuable books owned by the Institute, spoke about his work with special reference to the problems of the R.I.B.A. Library. On 8 November Mr. Basil H. Jackson [F] introduced an evening devoted to the works of his father Sir Thomas Graham Jackson, Bart. (1835–1924).

The next meeting, to which all members and Students are invited, will take place on Monday 13 December at 6 p.m. when Mr. D. Stratton Davis [A] will speak about J. B. Papworth.

The Chairman of the Group is Mr. John Summerson [A], and the Honorary Secretary is Mr. Kenneth S. Mills [A].

## Centenary of 'The Building News'

THE BUILDING NEWS, which amalgamated with THE ARCHITECT nearly 30 years ago under the name of THE ARCHITECT AND BUILDING NEWS, came into existence at a period of great commercial expansion. Nevertheless, THE BUILDING NEWS kept its eyes fixed firmly on architecture and particularly on what are today called 'technics'. In the 1855 volume is a description of a poured concrete house in France by a M. Coignet and, scattered through its volumes, are early references to materials and constructions which are now the basic materials of the modern movement. Soon after the amalgamation, there began a famous series of articles by Howard Robertson and F. R. Yerbury which, by describing and illustrating the work of Perret, Garnier, Dudok, Le Corbusier, Gropius, Holzmeister, Mies, Roux Spitz and many others, set the modern movement on its feet in Britain. It has never been more alive and forward-looking than under its present editor, Noel Musgrave, to whom we offer our best wishes on the start of the second century.

## 'Out of the Clouds'

In the photograph published in the last JOURNAL of the film set reproducing the concourse of London Airport there were four persons. The names of three of these persons only were given with the photographs supplied by Ealing Studios. The fourth person, whom perhaps we ought to have recognised, was Mr. Gibberd's partner, Mr. R. J. Double [A].

## Army Appointment for Architect

Mr. Gontran Goulden, T.D. [A] has been promoted substantive Colonel and is a Deputy Anti-Aircraft Defence Commander in the London Area. Colonel Goulden, who has been in the Territorial Army since 1931, is Deputy Director of the Building Centre. Promotion to full Colonel in the Territorial Army is a rare distinction.

## R.I.B.A. Diary

TUESDAY 7 DECEMBER. 6 p.m. General Meeting. *Art History and Contemporary Art*—Basil Taylor.

THURSDAY 9 DECEMBER. 8.30 p.m. A.B.S. Ball. Grosvenor House.

MONDAY 13 DECEMBER. 6 p.m. Library Group Meeting. Mr. D. Stratton Davis [A] will introduce an evening on J. B. Papworth.

DECEMBER 9–22. *Improvements and Conversions*. Exhibit by the Ministry of Housing and Local Government.





# Inaugural Address of the President

Mr. C. H. Aslin, C.B.E.

Given at the R.I.B.A., 2 November, 1954

I HOPE THAT MY FRIENDS AND GUESTS who are not members of the profession will be good enough to bear with me for a little time, because rather than give you an amusing, informative, or scholarly talk on some form of architecture I wish to touch on a number of matters which have exercised the interest of all our members for some little time. Before I begin however I should like to take the opportunity to refer to my indebtedness to a large number of people. I owe a tremendous debt, which can never be repaid but which can at least be acknowledged, to my colleagues in this Institute; my own staff in the office I have the honour to control, and to the staff of the R.I.B.A., without all of whom no President could last of his own volition more than a few moments.

The importance of each item in my talk is not indicated by the order in which it is dealt with and I need hardly say that the views expressed are my own and do not necessarily represent the opinions of the Council or general body of members.

You may know that recently we have been concerned with a movement either to give the Royal Institute the character of a trade union, or to form such a union under the wing of the Institute, leaving the Institute to exercise its ancient function as a learned society. The feeling was said to be so strong that the Council caused a questionnaire to be sent out to all members and students. The question 'Do you wish to have a trade union able to look after your financial and other interests' was answered by a comparatively small proportion in the affirmative. The problem of setting up such a body within the framework of the R.I.B.A. is obviously very difficult, and not the least of the difficulties is the fact that the Royal Institute is made up of members who are employers and large numbers of others who are employees. If we were not careful we should have an organisation which supported one section of members to the disadvantage of the others, and before long we might indeed have a variety of organisations in some sense antagonistic to each other formed within the R.I.B.A.

There seems to me to be every reason why such a body should not be set up, but on the other hand it seems logical to suppose that a body which has, for many years, fixed the remuneration due to private architects, should at the same time have some machinery which could consider in relation to the scale of fees the salaries of members who may never become private practising architects, and I think it is on these lines that the problem might be approached. You might say that this is a long-term policy. I think it should be,

whatever methods are adopted; and I am quite certain that none can produce quick results. I think it was Francis Bacon who said 'I hold every man a debtor to his profession', and that statement is certainly true in connection with the profession of architecture, and whereas we should all support the view that the architect should be reasonably paid, I think it to be eminently true that the first charge on the architect is his adherence to the profession which he serves. In short, I believe that the suggestion that any form of trade union should be set up, whose sole concern is with the remuneration of the architect, is a bad one: the matter should be approached from a much wider angle, and in such a way that a learned society can properly look after its members without in any way detracting from its proper function.

The next item of interest, which is at this moment being investigated by a strong Committee, is the most important matter of education in the profession.

The pattern has changed completely in the last 50 years. At the beginning of the century by far the greater proportion of work in this country was carried out by private architects for private individuals and organisations. It is true that at that date local government organisations had authority to build a variety of structures such as schools, markets, tramway depots and other buildings connected with the requirements of the various operations for which those authorities were responsible. The first large-scale building for which local authorities were responsible was housing, and since 1919 the volume of work which they have had to undertake has increased. This added responsibility was further enlarged by the 1944 Education Act, which not only increased the volume of work permissible but enormously increased the volume which they were compelled to do by an Act of Parliament. The effect of this has been to produce a programme which could be carried out either by architects in private practice, or in departments set up by local authorities. The bulk of authorities have elected to carry out the work by the latter method, though a number of them have in addition provided commissions for private practitioners. What all this means to the profession is that whereas at the beginning of the century by far the greater part of all commissions was undertaken by private practitioners, at the present time the position is becoming reversed. Indeed 50 years ago the profession was roughly divided into two parts, viz: qualified architects who carried on practices and a large number of people who were known as architectural assistants, whose knowledge was gained by practice and

who, having no prospects of becoming practitioners in their own right, were content to accept posts as assistants to architects, with no thought of doing anything else. The position now however is vastly different, and all young architects enter the profession fully qualified by examination. They are able to act in their various degrees as fully qualified members of the profession from the moment they go into an office. Their training and ability are naturally quite different from those of persons in the past who were content to act as assistants to qualified architects. This fact creates a new problem in the profession—how they should be remunerated. It is quite clear that none but a small proportion of the architects who enter local government service can hope to attain the better and more responsible posts, and it is equally clear that by virtue of their training and qualities they ought to be paid at a higher rate than that which has in the past been offered to the assistant working solely under the direction of qualified architects. Some method must be discovered of properly rewarding architects in this new pattern. It is generally accepted that nothing is permanent, but this pattern appears to have come to stay, because we are now living in a community which is largely controlled by a central government and it is difficult to believe that in a reasonably short space of time we shall get back into an economy which is largely controlled by private enterprise.

You might think that all this has little to do with architectural education, but I think you will agree that the method which was largely in force 50 years ago will not do under present conditions. In the past, most architects who were trained were articulated to practising architects. They grew up, as it were, and had no formal intellectual training. This pattern gradually gave way to training in schools of architecture some of which are attached to Universities, and at the present moment there are 43 of these at home and in the Commonwealth, recognised by the Royal Institute. The result is that, though highly imaginative training is given to the student and he is I believe better equipped to carry out his duties than the student trained in an office, he is lamentably out of touch with practical building. I believe we have gone to the other end of the scale and that some method must be found of combining the practical experience which the former pupil obtained with the theoretical training the student now obtains at his school of architecture. I am not suggesting a remedy but merely pointing out that the time has come for a deep consideration of this problem, and indeed you will be aware that the matter is

already receiving the attention of the Royal Institute.

I am happy to say that the profession is also changing to a pattern which shows a much closer collaboration with all the other people concerned with the building industry. It might well be that the architect could, during his training, share some part of the curriculum with the builder. It is not, I suggest, outside the bounds of possibility that in some suitable universities we might have faculties of building and courses which would be attended both by architects and the senior builders. By senior builders I mean those who will take up executive posts in building firms.

The next matter, which I need only mention, is that a proposal has been made recently to reorganise the membership of the Council. It is quite true that as time goes on there is a necessity in ancient institutions to have an enquiry into procedure which may have served well in the past but which possibly needs some reorganisation to meet the changed circumstances of the present. I personally can see little wrong with the methods which are used to elect the Council but I am quite sure there is nothing, if members feel strongly about it, to prevent a re-examination of the problem which may lead to a solution to give greater satisfaction to the majority of members.

The other matter upon which I wish to touch is, for want of a better word, prefabrication, and this subject fortunately may have some interest to those members of my audience who are not architects. By prefabrication I mean the production of standard units of building such as walls, bases, doors, windows, wall blocks, roof blocks, and indeed anything which can be made in a factory: I do not mean the production of whole units of buildings such as sheds, houses, school-rooms, etc., sold as a standard answer to any given problem. Some members of the profession still think that the idea of factory-made components after the war had no object beyond obtaining a quick solution to some of our building problems. I believe however that it is a natural development of the machine age in which we live, and I further think that architecture can be produced by this method. In 1945-46 it was almost an impossibility to find prefabricated units or to induce manufacturers to make them—or indeed to find builders who would assemble them. Since that date the idea has made much progress. These methods are being used in all the countries on the Continent and there are modular societies whose membership includes architects interested in this method all over the world.

It may to some appear as an expedient arising out of the difficulties in which we found ourselves immediately after the war, but experience seems to show that it is a matter which will not only endure but will expand. Those people who are not in sympathy with this approach to present-day architecture are inclined to imagine that tradition stopped with the normal methods of building with bricks, stone, and reinforced concrete in situ, and tradition

is only carried on by using the same methods as in the past. My view however is that this method is a tradition continuing from the past, and in spite of the danger of prophecy I suggest that it may well be the appropriate method of a machine age of production. Up to the moment it has only been fostered by local authorities with large and continuing programmes, but I believe that before long we shall have so many manufacturers making components that it will be quite simple for an individual architect with an individual job to use any of these materials which will be manufactured for sale, either in large or small quantities, after they have been established by the large buyer. In other words, I think it has taken too strong a hold to be dislodged, and it is an unwise thing for those people who think it is a passing phase to wait for the time—which I think will never come—when a return can be made from this excursion to bricks, and stone, and mortar.

One thing which I am sure will prevent it is the changed outlook on design. In the not very recent past some architects designed from outside inwards. They built in a pattern in what was then considered to be an appropriate manner, and fitted in the rooms which they hoped would satisfy the inhabitants; though if they did not it was of less importance to the architects than that the structure as a whole should present an imposing pattern. The method nowadays, which is being more and more accepted, is that the architect should supply his client's needs, whether for a house, school, factory or any other building, and having satisfied that demand he must produce a structure of architectural quality. One of the things which in my opinion is bound to provide the appropriate answer is that we are getting much greater co-operation between the client, architect, and engineer, and indeed with everyone concerned with the building, than we did formerly. It is some satisfaction to know that judging by the comments of our fellow architects from abroad, we in this country are leading the way in this matter, and I may be allowed to express the hope that we shall long continue to do so; though of course we are delighted that many other countries are pursuing the same course and will naturally have important contributions to make.

From most of this address it might appear, especially to those members of the audience who are not in the profession, that the Royal Institute is largely concerned with all kinds of problems which personally affect the architect and do not necessarily impinge on architecture. I can however assure them that members of this profession are primarily interested in architecture rather than the conditions under which they work or the salaries which they enjoy. I think it is significant that Her Majesty the Queen is the Patron of our Royal Institute, and you will all remember the remarkable vows of dedication which Her Majesty made on her Accession. I am sure you will not think it an impertinence if I say that all architects are dedicated to architecture.

In this country we have a long tradition of great architecture over the ages, and I may be allowed to express the belief that the modern architect will serve architecture and its patrons as well as his illustrious forebears did in the past.

#### VOTE OF THANKS

Mr. Nigel Birch, O.B.E., M.P., Minister of Works: I should like to start by congratulating Mr. Aslin on being elected to the very high place of honour which he holds. It is always very pleasant to be able to congratulate somebody who, after long and arduous service, has reached the highest honour which his own profession can give him. I think I am right in saying that Mr. Aslin is the first President you have had for some time who is a local authority architect and who speaks with great authority on all matters concerning the public sector, to use the horrible jargon of building.

I ought perhaps to point out that I have now become the Minister of Works entirely unburdened by the slightest technical knowledge of this subject! But I want to say that something has happened which is of a certain amount of importance to you. After fourteen years, building licensing is going to be given up and is coming to an end next week. However, it still leaves you with a good many hoops to jump through.

Although we have given up building licensing, it does not mean that the Government, and in particular the Ministry of Works, are losing interest in what is happening with architects and with the building industry in general. We are determined, as far as it lies within our power, to prevent either overloading or underloading of the industry; that is to say, we want to keep building at a high and stable level and to take it to as high a quality as we can get it. We shall go on playing a part there, not only with architects but with builders and with the building materials industries.

I understand that in the past the relations between the Royal Institute of British Architects and my Ministry have been very cordial, and I shall do everything in my power to see that they go on being so. We shall depend very largely upon you because, if we are to keep building on a steady level, it is important that we have all the best information about what is going on. We hope that both nationally and regionally we shall be able to rely upon you for up-to-date information about present and future prospects in building.

I come now to the President's Address and I should like to congratulate him upon it. I hope that he will take it as a compliment if I say that it was an admirable example of prefabrication. The President started off by talking about a trade union for architects, but I thought he seemed rather nervous about a 'breakaway' which has been so much in the news! I thought he had some very useful and profound suggestions to make on education in your profession, and no doubt during his term of office he will have further words to say to you about those things.

I should like to end by thanking your President for his Address, by wishing him every possible good fortune during his period of office, and by expressing the hope that the relations between architects and the Ministry of Works will remain as good as they have been in the past, and will, if possible, improve.

**Brigadier E. H. L. Beddington, C.M.G., D.S.O., M.C.,** Chairman Hertfordshire County Council: I take it that I have had the honour of being invited to second this vote of thanks to you, Sir, for your Inaugural Address, not for myself but as the representative of the local authority whom you serve when you are not devoting yourself to the Royal Institute.

I can assure you that the Hertfordshire County Council is very proud that the members of the Royal Institute have seen fit to elect as their President its County Architect. I believe this to be the first time that the Royal Institute has so honoured an architect serving a county, and I am convinced that this departure from precedent has been warmly welcomed in local government as a whole and that it will do a great deal of good. To be asked to come from the comparative obscurity of a County Council to address such an audience as this, in succession to a distinguished Minister of the Crown, is very unusual but perhaps it was caused by a feeling of gratitude to the County for its wisdom in the selection of its architects.

Up till 1945 we had no architect; we had a most excellent County Surveyor who combined with the care of the roads the duties of County Architect, which art was of course really outside his province. When he retired we formed an Architects' Department with a County Architect, a Deputy, and the appropriate staff. From a large field of candidates these were duly selected and our first County Architect is now your President, and our first Deputy is now the Chief Architect at the Ministry of Education.

The position of your President is a very enviable one, for not only does it mean that he is distinguished in his profession, but what is much more important, it means that his fellow practitioners have such trust in him, his character and his qualities of leadership and guardianship of the traditions of their Institute and art that they unanimously elect him as their President to represent them to the country. No man can attain such recognition from his fellows unless he is an outstanding personality. I am quite sure that you will find you have made a very fine choice.

The President's inaugural address deals so largely with domestic and technical matters of great moment to your profession both now and in the future that it would ill become me as a layman to comment upon it, but there is much food for thought in it and it will amply repay study and reflection. We are all very grateful to him for it.

As a complete but interested amateur of building, there are two points that have struck me about your profession. The first is that owing to the social revolution which

we are passing through the scope for private architects is narrowing. The bulk of the big work in future must be for financial reasons forthcoming more and more from the Government, local authorities, public boards, commerce and industry, and it will be for the ambitious men of your profession to seek to work for such bodies and to endeavour to raise their standards. The second is the need not to build too permanently. Science is moving nowadays so fast that buildings unless intelligently designed with a view to adaptation to new circumstances rapidly become obsolete. This applies particularly to educational, industrial, agricultural, and office buildings, of which we can see many examples throughout the country with years of life in them but utterly unadaptable to modern conditions.

I now have the great privilege and pleasure of seconding the very hearty vote of thanks which has been so eloquently and aptly moved by Mr. Nigel Birch, and in coupling with it our best wishes to the President for a very successful tenure of his high office.

*The vote of thanks was carried by acclamation.*

**The President:** It is my obvious duty to thank you for the very kind response you have made to the proposition so charmingly and ably proposed by the Minister of Works and seconded by Brigadier Beddington.

We are delighted to have the Minister of Works here, and I think it is charming that he should have come so soon after taking on his new office. He bashfully said that he knew nothing about it, but it is strange how various new Ministers take over this, that and the other in their stride. I also wish to echo his words and say that I hope that the cordial relations which exist between this Institute and the Ministry will continue during my term of office. I must also thank him for his kindly references to myself.

To Brigadier Beddington I must say that we did not invite him just because he happened to be the Chairman of the County Council but because he is himself as well, and without his kind cooperation and agreement and his influence on the Hertfordshire County Council I should not be here at all. I am here by their courtesy and it is charming of them to allow my office to run itself for a year or so. My only fear is that it will run so well that when I have finished my term of office I shall not be needed any more. I shall probably have to arrange with fellow architects at Hertfordshire to make a few blobs so that I can pretend to come back and straighten them out. I am most indebted to Brigadier Beddington for saying such kind things and to you all for the charming way in which you received them.

I should like to take the opportunity of welcoming all the guests who are here to-night. It is very nice of them to come when they need not. I should like to offer a special word of greeting to our friend, Mr. Glenn Stanton, who is the Immediate Past-

President of the American Institute of Architects. Tomorrow he will be flying back to the United States and I am sure he could have found something more exciting to do on this his last evening in London.

We also have present with us our good friend Sir Arthur Stephenson from Australia. He has the distinction of being our last Gold Medallist, and he also had the honour of having that Medal presented to him by the Queen, who took it all the way to Australia. No previous Gold Medallist has had that great distinction, but here we have one of our Australian members who received not only the Royal Gold Medal but a Knighthood when Her Majesty went to Australia last year.

I shall take the liberty of asking Mr. Glenn Stanton, first of all, to say a few words to you and at the same time shall present him with a certificate which shows that he has been elected an Honorary Corresponding Member of the Royal Institute in the United States.

*The President then presented the Certificate to Mr. Glenn Stanton.*

**Mr. Glenn Stanton:** We have the opportunity of being very close to one of your godchildren, the Canadian Institute, and we have enjoyed that association very much. It was my privilege to go to Vancouver to meet the distinguished Past-President, Mr. Graham Henderson, and Mrs. Henderson, and your remarkable Secretary—whose name slips me! We had the pleasure of bringing them across that unfortified border. I should like you to know that wherever the Hendersons and the Secretary went in Canada and in the United States, they left friends—very warm friends—on a very long trail. We were proud to have them at our headquarters in Washington and in my own home town. We hope that that can happen more often, and I should like to invite you informally now, until you have a more formal invitation, to set aside some time in May of 1957 to come to Washington to help us celebrate our centennial.

Thank you, Mr. President, it has been a great pleasure to be with you.

**The President:** I am sure that you would like me to thank Mr. Glenn Stanton for his kind remarks and for having taken the trouble to come here on his last evening in town before flying back home. We shall make a note of that date and see that somebody flies over to the United States to help celebrate the centenary of the American Institute.

May I now ask Sir Arthur Stephenson if he would be kind enough to say a few words.

**Sir Arthur Stephenson:** My position is a difficult one because I have to thank you for something that was so unexpected that it is difficult even now to realise that you saw fit to give the Royal Gold Medal to Australia and, Sir, to me. I shall not pretend for one moment that I was not very pleased because I was more pleased than



I can say, but I still cannot imagine why it was done.

Through the gracious thought of the Past-President, Sir Howard Robertson, your Council and the Secretary—I cannot remember his name for the moment!—you approached Her Majesty the Queen and said, in effect: 'We have awarded this Medal to an Australian', and she accepted the invitation to present the Medal to me in person. I should like to tell you something about that because it will remain with me to the end of my days.

I received a summons from Sir Michael Adeane to say I must attend in person at Government House in normal dress at a certain time. When I arrived I was taken into a drawing-room. As I walked in I saw a beautiful woman leaning over a couch by the window. When I entered she straightened up, walked over to me with her hand out and said: 'You are Mr. Stephenson; I have something for you which has been awarded to you by the Royal Institute of British Architects in London', and she picked up the case, opened it and showed me the Medal, holding it up to the light in the most gracious manner, saying: 'Don't you think it is beautiful?' I replied that I certainly did, and when Her Majesty put it into my hand I thought it was the most gracious thing anyone could ever experience.

The award had been announced in the papers for days before the event, together with the news that the Queen would be presenting the Medal, and many people rang me up and spoke to me on jobs, including workmen, asking me to give a message to the Queen when I saw her. After Her Majesty had presented me with the Medal I asked her whether I could deliver a message to her, and she told me that she would be pleased to hear what I had to say. I gave her the message of the workmen and the people, and told her that I had been commissioned on their behalf to thank her most sincerely for the great thing she had done in coming out to Australia, and to tell her that she had given the country a spiritual uplift, for nothing like it had occurred before in our history. She walked away slowly and then came back and asked me some questions. I had better not tell you what they were because some I could answer and some I could not!

The visit of the Queen to our country has been an event of supreme importance for us, and in my view now is the time when a visit should be made by the R.I.B.A. Council to Australia, to New Zealand and in time to Africa and perhaps to Malaya. It is tragic to think that none of these countries has seen a representative from the Council of the Royal Institute and it is of very great importance, because we people are British to the core. This Institute is our principal guide and pride and, therefore, it is necessary that someone from your Council should go to these southern lands, because nothing could give more spirit and be of more value than such a visit.

**The President:** Having seen and heard Sir

Arthur Stephenson there can be no doubt why he received the Gold Medal and his Knighthood. He was obviously the proper person to receive both those honours.

As far as the invitation to visit the far-flung Empire is concerned, as Brigadier Beddington is here I might perhaps say that if I am given six months' leave with pay I should like to go to Australia!

#### UNVEILING OF THE PORTRAIT OF SIR HOWARD ROBERTSON

**The President:** I have now the pleasant duty to perform of unveiling a portrait. We do not really need a portrait to remind us of the indebtedness of this Institute to Sir Howard Robertson. I think that he looks a little more solemn in his portrait than he is normally. We owe a great debt of gratitude to Sir Howard and, I may add, to Lady Robertson for the work which they have done as President and his lady in the last two years. He is a very difficult man to follow.

We are also grateful to the artist who painted this picture, Professor Rodrigo Moynihan. He must have had a very difficult task because I am sure that Sir Howard did not sit still.

*The President then unveiled the portrait of Sir Howard Robertson.*

**Sir Howard Robertson:** I thank you, Sir, for the very kind things you have said, none of which I am sure you believe!

One of the first things that happens when one is elected President is that a letter of instruction is received from the Secretary—whose name I have forgotten!—and at the end there are the words 'By the way, at the end of your term you will probably have a portrait painted and you might begin to think about the artist'. I thought about the artist and I thought that Rodrigo Moynihan was a pretty good bid. I really liked him as a painter. When I saw the portrait in the Royal Academy for the first time I said 'Good heavens, I have seen that man somewhere before, but I do not like the look of him!' But painters are not like photographers. You go to the photographer for one sitting and he makes six portraits. When you go to a painter you go for twelve sittings and he makes one portrait out of you. The painter, alas, looks deeper than the photographer. He looks into your soul and puts it on the canvas and what you see at the end is not very nice! It shows that Professor Moynihan is a very good painter, and I certainly recommend him. Thank you very much.

**Professor Rodrigo Moynihan:** Painting a portrait is one thing but having to speak about it afterwards, particularly publicly, is another. You can imagine that it is a tormenting thing for a painter to endure to have one of his pictures hanging behind a cloth not knowing, until the cloth is pulled aside, what it will look like.

Sir Howard Robertson is a very good sitter. I cannot say that he is one of my best sitters from the point of view of discipline, but he was certainly not one of my worst, and the portrait was painted

over a rather hard time of very bad weather when the light was very poor. But he always turned up and we would boil up some disgusting coffee which he seems to have enjoyed. I wish I could have done it in one sitting and given him six from which to choose, but it took all my efforts to produce that one and I enjoyed it very much.

#### PRESENTATION OF THE R.I.B.A. LONDON ARCHITECTURE BRONZE MEDAL AND DIPLOMA 1953

**The President:** The next pleasant duty I have to perform is to present the R.I.B.A. London Architecture Bronze Medal and Diploma for 1953. On this occasion Messrs. Devereux and Davies have won the Medal for the new Out-Patients' Building, St. James' Hospital, Balham. I think that it is a most notable contribution to hospital buildings, and I have the greatest possible pleasure in presenting these two gentlemen with the Bronze Medal and Diploma for 1953.

*The President then presented Mr. Alan H. Devereux [F] and Mr. E. L. W. Davies [F], with the London Architecture Bronze Medal and Diploma for 1953.*

**The President:** We also have a replica of the Medal which is to be presented to Mr. A. C. Stuart-Clark, the Chairman of the Wandsworth Hospital Group Committee, who represents the owners of the building. We present this replica to the owners of the building for being so skilful in selecting architects who have done such a fine job.

*The President presented Mr. A. C. Stuart-Clark with the replica of the Medal.*

**Mr. Alan H. Devereux:** I cannot say how honoured we are in coming here this evening to receive this Bronze Medal and Diploma. It is difficult for me to speak about hospital architecture with Sir Arthur Stephenson on my right hand and Sir Howard Robertson in front, both of whom have had so much experience. But I do feel that it is an important building of the year in that it is a hospital building. There is surely no field of architectural endeavour more important than the hospital field and none more neglected since the war. I am very glad to hear of the release of building restrictions, and I only hope that in some way more money will become available for hospital buildings.

Since the Out-Patients' Department has been opened I am told that there has been a great increase in the number of patients, and that the number of attendances per patient has been reduced. This seems to suggest that our National Health Service and the patients' health of mind and body can benefit enormously from new buildings.

When I look back at the old out-patients' buildings I can see again the old patients' hall, with the patients on wooden forms overflowing into semi-dark passages. There was nothing in their physical surroundings to induce a feeling of hope or even cheerful-

ness. This problem of the patient seemed to me at the outset to be the most challenging one, as vital as the complex problems of the medical and nursing staff, and I should like to point out that in this building the planning of the patients' waiting space and their treatment lend much of the significance not only to the interior but to the elevations.

The building was, in fact, designed from the inside out. I had no clear picture of the elevations until the internal planning was more or less irrevocably decided. Perhaps this was fortunate, for the elevations had to be entirely re-designed while the structure was actually going up. When the acute steel shortage arose the foundations were in, but we had to abandon our reinforced concrete frame and to introduce the load-bearing brick piers which are a conspicuous feature of the façade. I wonder whether, had that crisis not occurred, I should have been here to-night!

I cannot let this opportunity pass without saying something about the contributions made by others to the success of the building. First, there was the collaboration with the medical and nursing staffs, the consultants in the various specialties had a large share in determining the arrangement in their individual suites and Matron, to whom we owe a tremendous amount, dictated the nursing requirements.

I should also like to mention Sir Hugh Linstead who, as Chairman of the Group, took a lively interest in everything that we did, not only in practical concerns but in aesthetic matters.

I must also mention the excellent work put in by the consultants who, together with their staff, had some very tricky problems to tackle in a rather unorthodox building. I would also like to thank the builders, Messrs. Marshall Andrew, for the care they devoted to the quality of the work, and this includes the numerous specialist sub-contractors and indeed every man on the site who did his part in providing a good job of work.

I could scarcely exaggerate the debt I owe to my partner, to whom I am sure more credit is due than to me, and both of us owe a very great debt to Lewis Martin. He was my chief assistant when I was first entrusted with the work. Unfortunately he had to go back to New Zealand before the completion of this building to which he had devoted so much of his time and energies. It was for him a real disappointment that he did not see the building functioning and I am sure he would have liked to be here this evening.

**Mr. E. L. W. Davies:** This is a red-letter day in my career, and I can only endorse everything that my partner has said so much better than I, as well as the words he used about those who worked with us.

In the course of that work on the hospital we had wonderful cooperation and education. We were educated by the medical and nursing staff three years ago when the project was handed to us, and then in turn we feel that we were able to educate the hospital authorities in some of



Sir Howard Robertson, Past President. From the portrait by Professor Rodrigo Moynihan

the ideas that you see to-day. We cut across all the old sterile conditions that one normally finds when entering a hospital. We went out for atmosphere and we did use natural materials.

We hope that we shall be able to return and in close collaboration with the medical and nursing staff re-examine the building after it has been in use for a year, when it will be possible to readjust the units to be right up to date. We hope the building will never become out of date.

I have ascertained that for eighteen years this Medal has not been presented to the architects of a hospital building, and it is very nice to think that St. James' Hospital is the first under the National Health Service. Another interesting feature is that this Medal has only been south of the

Thames twice, and both the buildings concerned have one thing in common, namely, that when you go into them you may be detained. One is St. James' Hospital and the other is Blackheath Road Police Station!

**Mr. A. C. Stuart-Clark,** Chairman of the Wandsworth Hospital Group Committee: It is, of course, entirely as an impostor that I stand here at all. I am afraid that by virtue of the office I now hold I received this Medal. The person who did the work was my predecessor, Sir Hugh Linstead, so far as the Committee is concerned, and it is he who, more felicitously than I, should say what an honour it is that we should be entrusted with the building which has deserved and won this award.

There are two things which I should like to say about this building of which we are enormously proud. I think that you, Mr. President, in your Address spoke of satisfying the client. The client in this case is not the Management Committee, not even the doctors nor the nurses, but the patients, and this building has so supremely satisfied them that that is its mark of success. The admirable girl who receives patients was faced with this problem the other day. Two old ladies came in and when she said 'Can I help you?' they replied, 'No, my dear; we have finished our shopping and the cinema is not open, but it looked so comfortable in here and we wanted to sit down!'

Secondly, it is a landmark. We like to think that it is a landmark in the post-war building of hospitals so far. It is something which people come very gladly not just to see and to admire in the vague, uninformed and uninterested sense, but to study and follow.

I thank you, Sir, and this great body

whom you represent for giving us a permanent facsimile of the award given to the architects. It will always have a place of honour in the Group and it will be a permanent record that we, when we first saw the building and said it was something very good indeed, were right, because what greater justification for that thought could there be than the setting of the seal of approval by so august a body as the one who gave this award tonight?

**Mr. S. Marshall Andrew**, Chairman of Messrs. Marshall Andrew and Co. Ltd.: It is indeed a very great pleasure and honour to be here on this auspicious occasion and to be associated with this award. Somehow, so far as contractors are concerned, their dealings with the architectural profession always seem connected with awards, sometimes positive, sometimes negative. In the case of the former the awarding of a contract, in the latter case the award of a negative answer to a claim.

I should like to say on behalf of my firm that they are indeed pleased to have had the honour and satisfaction of being associated with Messrs. Devereux and Davies, the architects; Mr. J. K. Carless, the quantity surveyor; Messrs. Clarke, Nicholls & Marcel, the consulting structural engineers, and Mr. H. A. Sandford, the consulting engineer for services and supplies; not forgetting all the various sub-contractors involved in the production of this fine building. I can assure you that this occasion is one which will remain with me—and Marshall Andrew & Co. Ltd.—forever.

May I in conclusion and with respect say a personal word about Mr. Devereux and Mr. Davies. It would be impertinent on my part to touch on their abilities as architects, but those who know them intimately are aware of their ingenuity, enthusiasm and drive. It is a pleasure to work under their direction and supervision.

## Correspondence

*The Editor, R.I.B.A. Journal.*

### MATERIALS AND TECHNIQUES

**SIR**,—Mr. Allen and Mr. Mills severely criticised renderings. Though there are certainly good reasons for this in the last 80 years, one cannot overlook the fact that there are numerous old rendered buildings in this country which demonstrate that in the earlier times rendering was a success. We must therefore assume that something went wrong in the last 80 years and it is worth while to investigate the cause.

In earlier times emphasis was on careful selection of the different materials in the mix and good craftsmanship. The time taken was not important. Rendering operations were never carried out in unsuitable weather and the building was left to dry out sometimes as long as two or three years before rendering was commenced. The slow setting of the pure lime rendering was of no importance.

To meet the modern demand for speed it has become general practice to admix a small amount of cement to speed up the hardening process and to produce a certain degree of early strength. The previously held opinion that lime and cement could not be used in the same mix has proved to be incorrect. The decision to render a building has to be made at the drawing board stage, though too often these days the decision to render is made at a late stage owing to difficulties in obtaining facing bricks or other materials; but rendering should not be applied just anywhere and anyhow.

Generous overhanging eaves have no place in the modern façade, but they did protect the rendering. Some other means should be provided to fulfil this purpose, for example, the provision of flashings on projections with adequate drips to throw

the water away from the wall. Also rendering should always stop at the D.P.C. level and never touch the ground. Copings should have a continuous D.P.C. under, as rain penetration can occur at the many vertical joints. A coping with a good overhang and proper drip helps to keep the wall dry. I have seen buildings where defective strong cement pointing in copings left wide gaps through which the rainwater dripped happily on and behind the rendering, causing disfiguring stains and eventual dislocation of the rendering.

Smoke pollution is certainly an eyesore, but the 'aggressive sticky dirt' settles on whatever material is used and not only just on a rendered façade. A rough rendering will show it up more than a smoother one which, as the smoke settles down on it more evenly, will not be spoiled to the same degree. Some architects have recently chosen for these very smoky areas a dark grey rendering for the main part of the façade, brightening it up by using lighter strong colours on other architectural features.

Of course the use of strong dense rendering would be ideal if it did not crack and craze, fatal to both looks and dryness of walls. Cracking is not only unsightly but permits the passage of water into the wall structure. The dense strong rendering holds it there and its effectiveness as a barrier against rain penetration is destroyed. A weaker rendering 'gives' to movements to a certain extent, but even if a movement crack develops this still does not mean a damp wall, as water is allowed to evaporate freely at the first opportunity. A porous, less dense and less strong rendering, in short a lime-rendering, is less affected. It allows the wall to breathe, and if the aggregate used in the mortar is a crushed stone, it weathers evenly and behaves like any natural stone. A porous lime-rendering also allows any efflorescence to escape readily. Nothing in this life is stable and weathering is a natural process

which has its own beauty, as the many old buildings in this country show.

The sand used in the mix should comply with B.S. 1199. It is important that it has good working qualities and is well graded and clean; loamy sands, though more easily workable, produce a mortar of high shrinkage, resulting in cracks and crazings of the rendering. The undercoat is as important as the finishing coat. A badly applied undercoat, or an undercoat of uneven proportions of the different materials, spoils an otherwise good rendering.

Interruption of work, whether it is the undercoat or the finishing coat, will show and should only take place at the natural architectural features, otherwise it will impair the appearance of the building. If the area to be rendered is a very large one and not broken up, it is best to introduce honest regular straight lines which harmonise with the other architectural features.

There is no reason why renderings nowadays should not be as successful as in earlier centuries, so long as reasonable precautions are taken. Rendering is a material having its own merits and should be treated and respected as such. The small attention it needs for its protection can be given easily and will save many pounds in maintenance costs.

Yours faithfully,

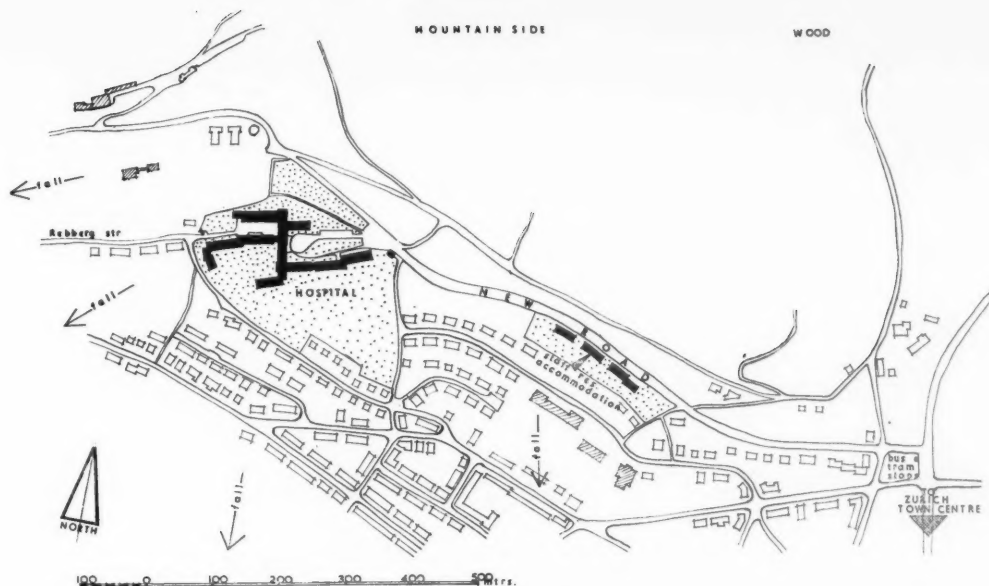
K. KEPPICH,

CALLOW AND KEPPICH LTD.

**EDITOR'S NOTE.**—Mr. Allen has seen this letter and replies:—

Mrs. Keppich's letter mainly discusses the factors which can make a rendering a failure or a success technically, and we are grateful to have it brought into the discussion of our paper. However, as she will appreciate, our criticisms were not directed at the technique of rendering; we were concerned mainly about its appearance for use on buildings in urban areas, and there it still seems that our comments broadly represent the facts.





## The New Hospital at Zürich (Stadtspital Waid)

By John Lincoln, AA.Dipl. [A]



Ward block for chronic cases

THIS NEW 418-bed non-teaching, non-training hospital on the outskirts of Zürich was built between April 1950 and September 1953. The design is the result of a limited competition which was won by R. Landolt, who formed a temporary partnership with the authors of the 2nd and 3rd awards. Before carrying out the very detailed work entailed they studied and visited a number of Swiss and European hospitals.

Two hundred and forty-three of the 418 beds are reserved for chronic sick patients,

for whom the hospital was originally intended. The other 175 beds are for acute sick patients, i.e. medical and surgical cases. The hospital's primary purpose is to relieve other hospitals in the area of their chronic sick patients, who will be able to stay at Waid indefinitely. Although the site had been earmarked for a chronic sick hospital, the Cantonal authorities, who contributed Fr.10,000,000 towards its Fr.29,000,000 cost, stipulated that provision should be made for medical and surgical cases. The balance of Fr.19,000,000 was paid by Zürich town, the cost per sq. metre for the combined buildings working out at Fr.224.45 or 10s. 6d. per sq. ft.

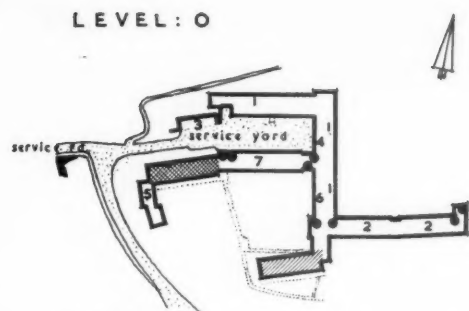
The site lies on a hillside to the north-west of Zürich. It falls away to the south and overlooks the town and the lake, with the alpine ranges as a background. There are extensive woods almost immediately behind the hospital, which form an attractive background to the buildings when viewed from the town. To avoid extreme contrast all buildings have been rendered in a mushroom colour and only precast window surrounds and balcony slabs have been picked out in white. All ward blocks face south and only the administration block with its clinics runs in a north-southerly direction.

In order to reach the hospital easily from the main road with its public transport, a new half-mile-long road was constructed at a cost of £100,000. Houses for the nursing staff were built on one side of the road, the other side rising sharply towards the hill top. There is an attractive pavilion at the hospital end of this road which serves as bus shelter, for a restricted bus service

between main road and hospital, and incorporates several kiosks.

One approaches the main entrance across an imaginatively laid-out courtyard with parking space and bicycle shelter. Apart from the service yard, which has got its own approach road at a much lower level, the main entrance provides the only access and is shared by arriving patients, visitors, casualties and a limited number of out-patients. The entrance has been kept wide and through the placing of the general enquiry office and telephone exchange in its centre arrivals are segregated upon entering.

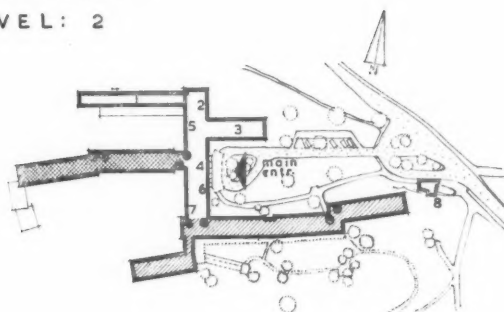
**Individual Siting.** The actual siting and planning of the individual blocks has been carefully handled, good use having been made of an additional east-west slope. By planning the north-south block (administration block) across this fall, two ground levels were created at different heights. This block (see plan, p. 13) acts as a spine, with chronic sick and acute sick wards reaching out to the east and west respectively. The operating theatre block is connected to this block and is opposite the surgical wards and near the main entrance and casualty admittance. Other buildings forming part of the hospital include a small block for resident junior medical staff and maintenance engineers and an occupational therapy extension which is near the chronic sick patients' wards. The north-south block contains all the medical and administration services common to all wards and out-patients. It provides at its lowest level free circulation between the following departments and ward lifts: air raid shelter,



- 1 PIPE DUCTS
- 2 STORES
- 3 GARAGES
- 4 MECH. EQUIPMENT
- 5 STAFF RES. ACCOMMODATION
- 6 AIR RAID SHELTER
- 7 LABS., PHARMACY, DISPENSARY, PHOTO. DEPT., PATS. LIBRARY, SAUNA.

● main vert. circulation

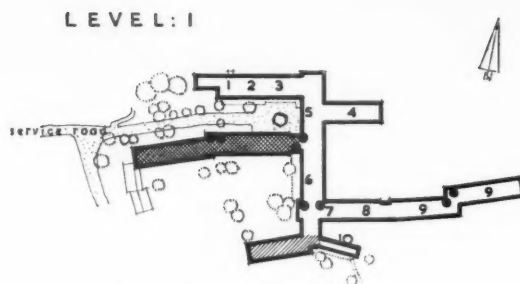
## LEVEL: 2



- 1 UPPER PARTS OF B.H., L.G. KITCH
- 2 DIAG. X-RAY DEPT.
- 3 OPERATING THEATRES
- 4 REC. & CASUALTY DEPT.
- 5 SURGICAL CLINIC
- 6 ADMIN. DEPT.
- 7 MED. CLINIC - MATRON ETC.
- 8 BUS STOP & KIOSK

● main vert. circulation

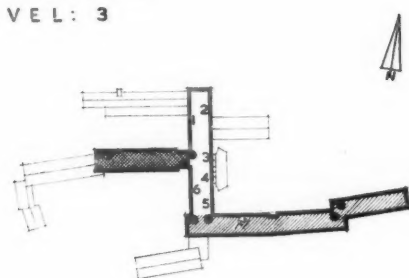
## LEVEL: 1



- 1 BOILER HOUSE
- 2 LAUNDRY
- 3 KITCHEN
- 4 KITCHEN STORES
- 5 DOM. STAFF DINING
- 6 MED STAFF DINING
- 7 RECORDS
- 8 MED. STORES & PACKING
- 9 STORES
- 10 OCC. THERAPY

● main vert. circulation

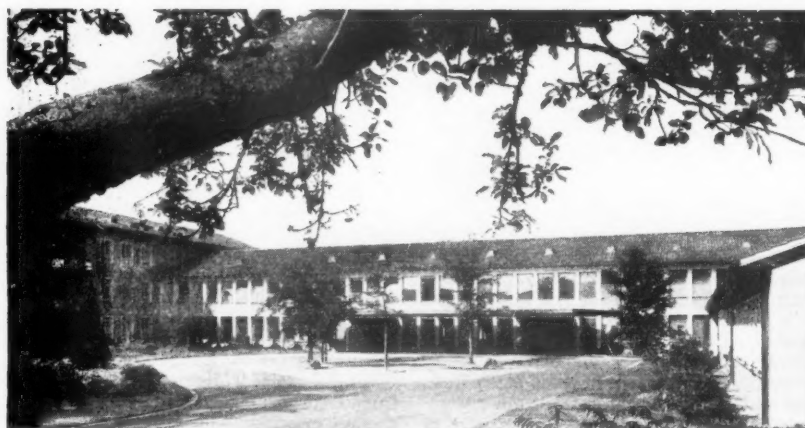
## LEVEL: 3



- 1 PHYSIOTHERAPY
- 2 HYDROTHERAPY
- 3 GYM. & ASS. HALL
- 4 E.N.T. & OPHTHALMIC DEPT.
- 5 THER. X-RAY
- 6 DENTAL & MED. CLINIC

● main vertical circulation

Plans at the four principal levels



Entrance court, administration and treatment building

mechanical equipment, garages, laboratories, pharmacy, dispensary, photography department, patients' library, a sauna and the mortuary department with its separate

exit to the service yard. Above this level (level: 1) is the link with the kitchen. Here the staff dining rooms are level with the ground on one side of the block and look

out across the garden and the valley beyond. Also at this level are the central medical and other stores.

On the floor above (level: 2) is the main entrance with its attractive large entrance hall and its clear view to the west. Also reception, casualty department, diagnostic X-ray, administration offices, medical clinics and matron.

Casualty admittance, resuscitation and the emergency theatre suite, which has its own X-ray facilities, are immediately adjacent to the entrance and the department itself is connected to the main operating theatre block. The clinics and the diagnostic X-ray department are shared by ambulant patients and a small number of out-patients. In view of this it is perhaps disputable whether the position of the X-ray department is an ideal one, although its present close link with the theatre block is undoubtedly useful.

Level: 3, the highest of this block, contains the physiotherapy department, hydrotherapy, therapeutic X-ray and the remainder of the clinics including E.N.T., ophthalmic and dental departments. In the

centre above the main entrance is the gymnasium, which also serves as assembly hall on festive occasions. The reason for planning the physiotherapy department at this level was to provide the maximum amount of light and fresh air and it has been kept flexible internally through the use of demountable partitions.

The Operating Theatre Block on the north side of the main entrance court is a single-storey building with basement area and a roof space which houses the department's air conditioning plant. It has a central corridor and all operating theatres face north. The anaesthetic rooms, medical staff changing rooms, central sterilising rooms and other ancillaries face the court. Accessible from the corridor are the blood and bone banks and built-in electric heat generating units for blankets and hot water bottles. There are three theatres, a batwing suite with two tables in the aseptic theatre and an emergency theatre with a plaster room immediately next to it. The plaster room shares a dark room with an adjoining X-ray room. The splint store, incidentally, has been condemned by the staff as being far too small.

Of particular interest in this department is the sterilising equipment which was manufactured and fitted by Messrs. Schaefer of Berne. The three high-pressure steam instrument sterilisers in the combined sterilising and wash-up room are incorporated in continuous stainless steel counters and operate at 28 lb./sq. in. The sterilising process takes approximately 6½ mins. and the instruments stay in the trays for convenient carrying to the theatres, the doors to which are foot-operated. One steriliser has been adapted for the washing of exceptionally dirty instruments within the fitting, and the entire sterilising process including the washing in this case takes 20-25 mins. This method reduces risk of infection to theatre staff. The central sterilising equipment (serving the entire hospital) consists of two 3 ft. 0 in. by 1 ft. 6 in. by 1 ft. 6 in. autoclaves (28 lb./sq. in.) and three 2 ft. 0 in. by 1 ft. 4 in. by 1 ft. 4 in. hot air sterilisers. The autoclaves are automatically controlled but can be worked manually in the case of electricity failure. A vacuum pump ensures efficient pressure reduction and complete drying of sterilised objects. A safety device prevents the opening of the apparatus when in use. Apart from ten minutes which are spent loading and unloading the sterilisers, no further supervision or attendance is required. This is obviously a great time saver and reduces the temptation to overload the unit. The hot air sterilisers which are on the opposite side of the room have a special air-circulating system, a temperature and time-setting mechanism and reach a temperature of 200° C.

All metal parts, including the aluminium doors set in stainless steel frames, are left unpainted to eliminate maintenance and prevent a generally chipped or poor appearance. All windows have roller shutters and can be blacked out by electric mechanism.



Above: the main entrance canopy. Below: view of ward blocks showing landscaping



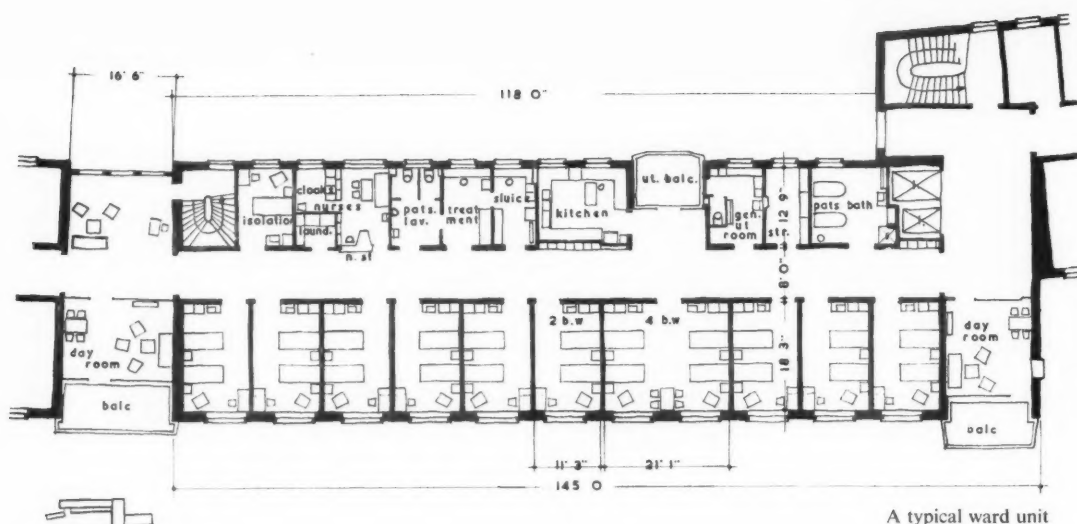
A useful arrangement at the entrance to the department is a bank of marked lockers in which articles for sterilising are left by other departments and through which they are despatched once sterile. A foolproof locking system safeguards against accidents or mistakes.

The department, together with the X-ray department, was planned to be near to the surgical wards in the west wing. It may be doubtful, however, whether operating theatres are best situated at ground floor level, especially when in proximity to the main entrance area.

The Services Block with its loading platform is situated at the north side of the services yard and is connected to the north-south block at its northern end. The block incorporates the kitchen, the laundry and the boiler house.

The kitchen and the preparation rooms are generous in size, are well equipped and have ample daylight. Cooking in the main kitchen is by electricity and in the diet kitchen by gas. The kitchen has mechanical ventilation in addition to natural cross-ventilation. There are no hoods over the central ranges, and the extract openings





**Detail of the occupational therapy wing**  
occur at the lower apex of the triangularly shaped roof space. The fresh air intakes are incorporated in the window cills. There is a large trolley park for electrically heated trolleys, and all doors between the kitchen and the ward lifts are controlled by photo-electric cell mechanism.

The laundry, which is next to the kitchen, is of identical construction. Its own lift connects it to the subway below, which is used for collecting dirty laundry from the wards.

The department looks after the whole hospital, and its differently sized washing machines are automatically controlled. The hot waste-water is used for warming cold water, thus saving fuel. The boiler house at the end of the block is extremely well planned and the generally tidy appearance of all services, together with an intelligent use of colour, produces an efficient and pleasant atmosphere. Fuel is either coke or oil, there being four months' supply space for either. The average daily warm water consumption is approximately 9,900 gallons.

**All Ward Blocks** face south, with ward ancillaries facing north; the layout of both chronic sick and acute sick ward units being identical. There are eleven chronic sick wards with the number of beds fluctuating between 21 and 23. The number of beds in the six acute sick wards varies between 26 and 30. Two of these wards are medical wards, the other four being surgical ones. Altogether the entire ward accommodation is composed of 42 one-bed wards, 100 two-bed wards, 44 four-bed wards. Six-bed wards were rejected on the grounds of not really representing any great saving, the additional depth of the wards necessitating air-conditioning.

Wards at ground level give access to the terrace and the garden. Every two wards share an examination room and every two to four wards a staff day room. The wards are linked by day rooms and solariums. Where two ward units adjoin in a continuous block they are divided by day rooms and waiting areas. An endless corridor appearance is avoided by cranking the blocks at this point. Staircases too are expressed externally to prevent a monotonous architectural exterior. Useful features within the ward unit include an airing balcony and a small laundry room which deals with uncontaminated washing.

Each patient has his own bedside locker, free-standing clothes locker, bed table, individual light fitting, bell push and radio diffusion outlet. There is also a telephone connection between each pair of beds. The type of bed which has been accepted throughout the hospital is the £100 'Embru' bed which permits the patient to change his own position by operating a hand pump lever. The bed is well made and its short axle distance allows it to be turned in restricted space. It is also quite firm when in rest position.

Cupboard space has been provided



The bus shelter pavilion underneath window cills and ward crockery is washed and kept in the ward.

**Construction and Finishes.** The buildings are of reinforced concrete frame construction with rendered brick walls. In situ piling had to be used and floors are solid reinforced concrete slabs with aerated concrete screeds. Corridor screeds, however, are of the floating type and most corridor walls are cavity walls to reduce noise transmission. The large underground storage areas have cork-insulated reinforced concrete retaining walls.

Finishes generally are of a high standard as one might expect, and great attention was paid to colour application and sound absorption. Corridors and lobbies are treated with acoustic tiling and vertical deal boarding. Wall finishes include flat oil paint, wall paper and calico which is stuck to the plaster and then oil painted. In some waiting areas where the light and aspect were favourable the application of murals combined with a lavish use of indoor



The 'Embru' Swiss hospital bed

plants has produced a fresh and exciting effect.

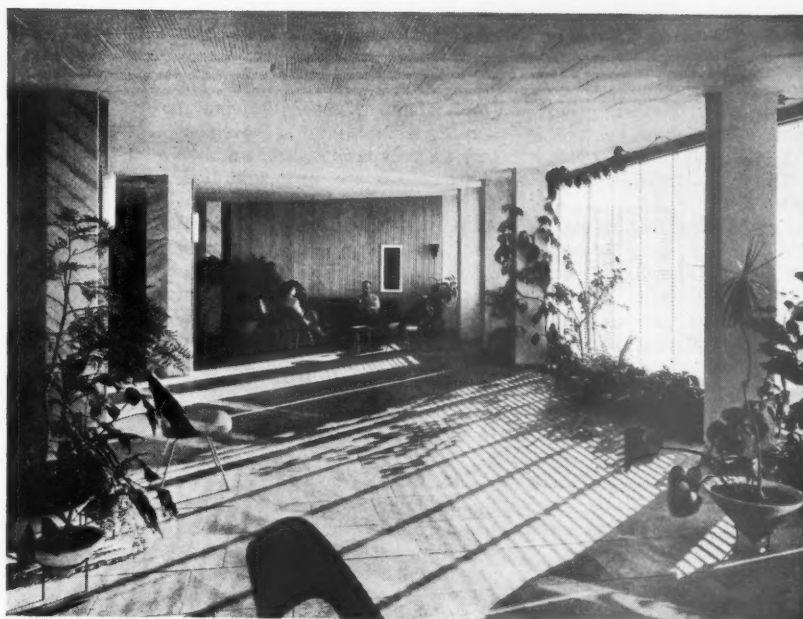
For the floor finish in the main entrance hall, staircases and waiting areas, unpolished floor tiles made from a local brown-grey granite were chosen. These are warm in appearance, comparatively quiet and prevent slipping. Cork tiles have been used for corridors and bed wards, and for most other rooms including clinics. Where this was not practical wood blocks or lino was used. Finishes in the operating theatre department include green wall tiles with terrazzo floor finish to match, and a very attractive mosaic floor in the department's central corridor. Double glazing has been used throughout the hospital.

**Landscaping.** A great deal of attention and no small expense has been paid to the garden layout and planting of bushes and trees. The falling ground has aided the actual building of the gardens, including the construction of a small pond. There are few steps and paths are negotiable for patients in wheel-chairs.

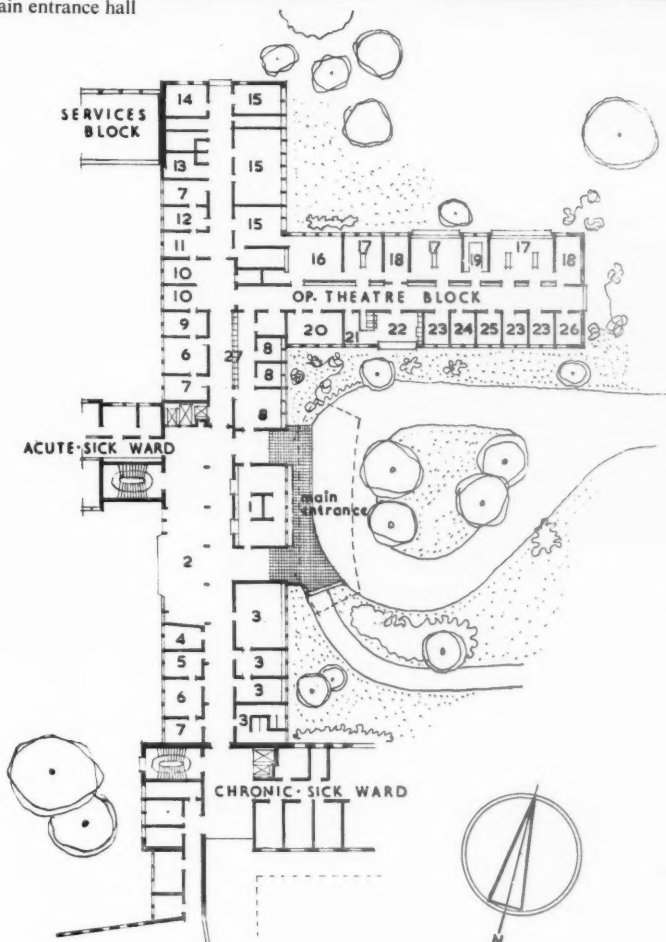
To sum up, it is fair to say that the hospital, in spite of its 400 beds, has the appearance and atmosphere of a home rather than that of a hospital in the accepted sense. Owing to its natural position and skilful planning it has succeeded in providing suitable accommodation for both chronic sick and acute sick patients, the high standard of all equipment and finishes ensuring efficient functioning as well as being architecturally stimulating.

*The photographs have been lent by Rob. Landolt, B.S.A., the architect. The plans are by the author.*

Right: Plan of the central block at entrance level  
Key: 1, Enquiries, Recep., Tel. Exchange. 2, Main Entrance Hall. 3, Admin. 4, Matron. 5, Sec. 6, Chief Surgeon. 7, Examination Rooms. 8, Casualty Dept. 9, Surgical Sec. Office. 10, Waiting. 11, X-ray Sec. 12, Radiologist. 13, Bed Ward. 14, Diagnostics Room. 15, Diagn. X-ray. 16, Plaster Room. 17, Op. Theatres. 18, Scrub Up. 19, Wash Up and Ster. 20, Endoscopy. 21, Plaster Bandages. 22, Central Ster. 23, Recovery Room. 24, Nurses. 25, Spare Room. 26, Store. 27, Ster. Lockers



The main entrance hall



## R.I.B.A. Exhibition: 'Your House'

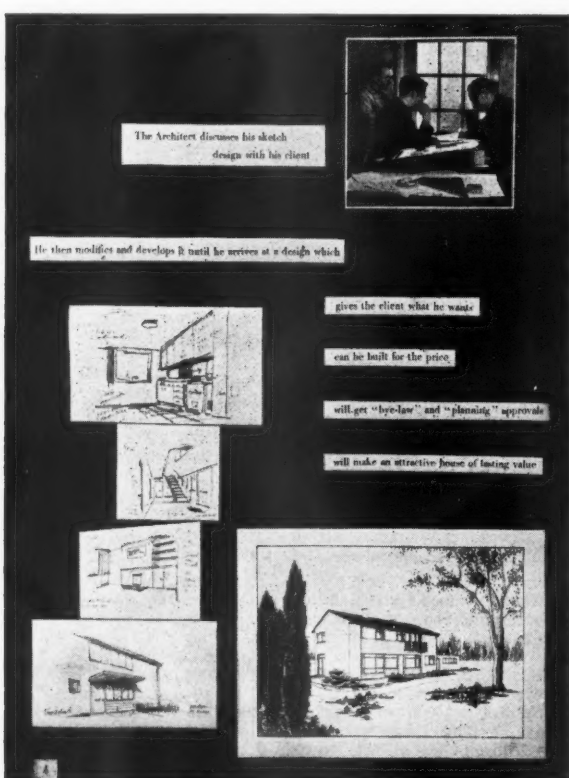
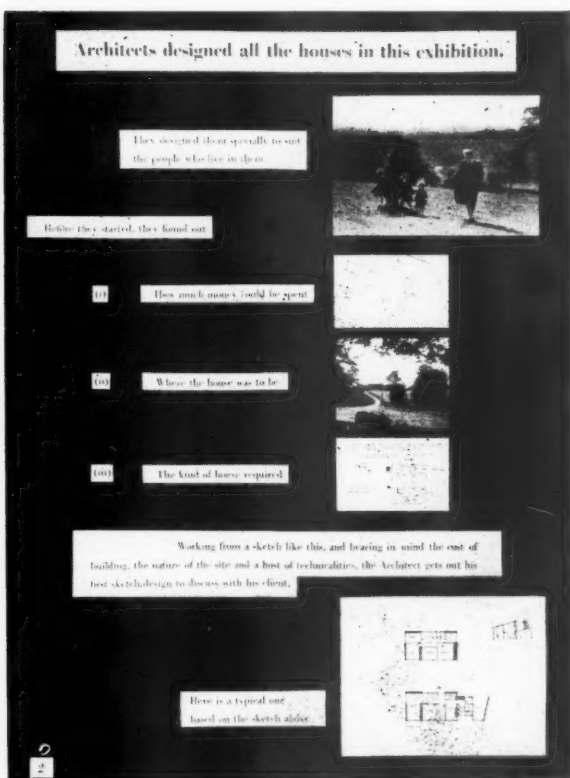
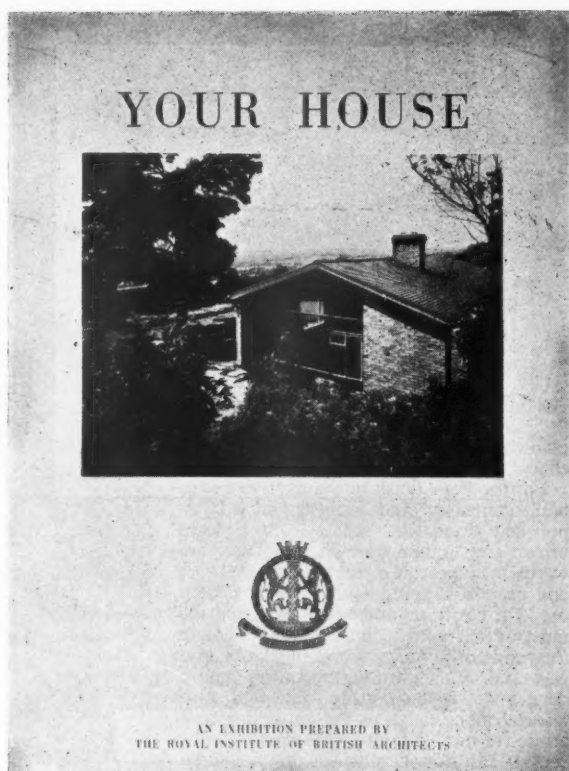
WORK on the second R.I.B.A. touring exhibition in the series 'The Architect and You' is finished and the first copy has been on view at Luton and Leighton Buzzard, will be at Biggleswade until 24 November and after that, from 26 November to 4 December, at Bedford.

The exhibition follows the same pattern as the first exhibition, 'Home and Surroundings', which has been touring for 18 months, has been seen by 45,000 people at 57 centres and is booked to be shown at a further eleven. Like its predecessor, this new exhibition has been designed for showing in halls or rooms as small as 30 ft. by 20 ft. without any fixing to walls, the screens being free-standing in the form of a spine with four wings. The story is told on 15 double-sided screens, plus one for placing in entrance halls and carrying a poster; in addition there are three blank double-sided screens on which Allied Societies can display local work.

'Your House' explains how the architect sets about the design of an individual house and illustrates some 30 houses which are grouped in price ranges 'Under £2,000', '£2,000-£3,500' and 'Over £3,500'. All are of individual character, specially designed for owners.

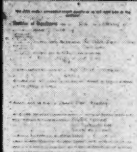
We reproduce the title screen (the outside poster screen is similar) and three of the first six screens which give a brief account of the process of designing and building a house for a private client. The fifteen screens which follow exhibit photographs and plans, all drawn to the same scale, of a representative selection of houses. We reproduce two typical screens. The next five screens, of which we reproduce one, show photographs of details. On the last screen is a diagram showing the proportion of total cost of the various items in building a house. The work covered by the architect's fee is explained.

Many Allied Societies, Chapters and Branches have already booked the exhibition. Early application by others will help in the arrangement of an economical tour.





When the client has chosen his builder, the Architect draws up a contract which legally binds the builder to build the house and the client to pay him for building it.



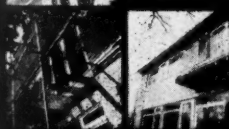
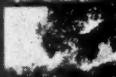
Payment is usually by instalments as the work progresses.



The Architect supervises the building work as it progresses.

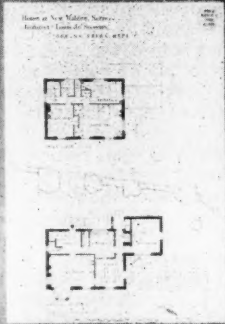
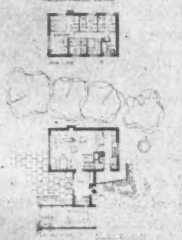


He passes the builder's accounts for payment by issuing a "certificate" for each instalment when he is satisfied that the materials and workmanship are of the quality specified.



Traditional construction but experimental planning. The interior of the house is divided up not in the usual way by structural walls but by prefabricated movable "partition walls" in the living room so the space can be easily adapted to its changing needs by simply rearranging the partitioning furniture.

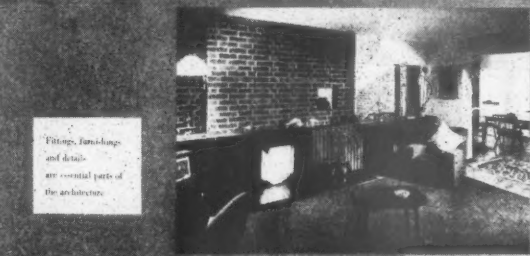
House in Haverham Lane, Glastonbury.  
Architect: Edmund R. Jones.  
1930-31, 1932-33.



House in New Malden, Surrey.  
Architect: Edmund R. Jones.  
1930-31, 1932-33.



A house of traditional design and construction in which it is noted that the design is a high standard of itself.



Fittings, furnishings and details are essential parts of the architecture.



Kitchen: R. R. R. & R. R. R. 1930-31, 1932-33.



Staircase: Edmund R. Jones 1930-31, 1932-33.



Dining room: R. R. R. & R. R. R. 1930-31, 1932-33.



Bedroom: R. R. R. & R. R. R. 1930-31, 1932-33.



# R.I.B.A. Conference on the Design of Health Buildings

## Report of the Discussions. Part I

**MORNING SESSION, 21 OCTOBER.**  
Mr. C. H. ASLIN, C.B.E., President R.I.B.A., in the Chair.

The President welcomed the Minister of Health and asked him to open the Conference.

**The Minister of Health, The Rt. Hon. Iain Macleod, M.P.:** In the period of nearly three years for which I have been Minister of Health I have been invited to open a great number of conferences, and a number of different motives, I think, have inspired the invitation. In some cases the audience probably felt that they would like to listen to the Minister of Health, and in rather more numerous cases they felt that they ought to. I think, however, that there is a third motive. After all, I am not only a customer of yours but, potentially at least, by far the biggest customer in this field. I and the Secretary of State for Scotland, and to a lesser extent the local health authorities, are responsible for most of the orders which will eventually be given for health service buildings. If I may speak to you largely in the role of a potential customer, I should like to deal with two points which do concern a client in this field and tell you what I want and give some indication of the sort of pocket which is available to me to meet the demands.

First of all, I should like to say a word about the amount of building which we are doing in this country. There are two different ways of looking at it, depending on your particular position in relation to hospitals. We are spending, to bring it all together, something like £11 million a year in this country at the moment, and we have spent about £60 million since the National Health Service came in. Those are formidable figures unless we look at them against the background of need, and then they are small indeed. We have to remember both the large size of the expenditure—because it comes from the taxpayers of the country—and also at the same time how small it is when compared with everything that we seek to do.

To give some sort of comparison with what we did before the war, if you express that £11 million in terms of pre-war costs, it is only about one-third of the building that we were doing in this country at the end of the 1930s, so that we still have a very long way to go, and I believe that even at pre-war values it would be only about one-tenth of the figure for the U.S.A.

I think that it is right to put this difficulty to you at the beginning, because it is largely about this that I want to speak. I believe that this very difficulty offers something of a challenge to the architect and to his ingenuity. It is not only of the financial

implications, however, that I wish to speak. Apart from the financial difficulties there is, or there may be, a changing concept of the hospital itself. Here I am bound to say that I find myself mildly embarrassed. I had intended to make a number of references to a paper which I have quoted often enough, because it colours so much of my own thought on this subject. It is a paper which was read by Professor Vines at the International Hospitals Congress held a little over a year ago. I was discussing this paper with that very distinguished Australian architect, Sir Arthur Stephenson, only last week and I now see in the audience, sitting next to each other, both Sir Arthur Stephenson and Professor Vines.

The three short extracts which I wish to read are these. First, Professor Vines says 'It is surely old-fashioned still to think of the hospital only as a place of disease whose sole duty is to attempt the cure of illnesses which so often come to it too late for effective treatment. Hospitals have been called the repair shops along the road of life, but they should have something more to offer than the functions of a garage.' Later in his paper, he says 'The real future of the hospital service may well come to lie, not in the wards, but in the polyclinics, and it is these which must gradually become the major centres of practical preventive medicine'. My final quotation is this: 'So the nursing units and the polyclinics may part company and become respectively peripheral bed-hospitals and central diagnostic clinics; to the latter a few beds are likely to be attached for purposes of short-stay diagnostic investigation and limited treatments. There is, after all, no fundamental reason why hospitals should offer the double service for in-patients and out-patients within the same group of buildings, an arrangement which may even encourage the easy hospitalisation of the patient.'

I do not try to prophesy to you, because I am a layman both in your field and in the field of medicine and hospitals, whether that line of thinking is right or not; I merely feel that it is one which you ought to study. I have no doubt at all that the general hospital is becoming less and less a place for lying in bed and more and more a place where we can concentrate all the various skills and techniques which have been built up and which will be built up, no doubt, in the future.

If there is anything in that way of thinking, and I believe that there is, then ideally, of course, such a change would call for a new set of hospitals; but that, within the limits of our resources, is not possible; it is quite unrealistic. We have therefore to see how best we can fit the hospitals which we have into that conception. Here I am

bound to say that I think we have met with very considerable success since the appointed day, with the help of those who have designed in particular the clinics and special departments of the hospitals; because the very fact that successive Ministers of Health have been driven by the difficulties of the capital situation to concentrate their thoughts on departments rather than on hospitals, on buildings and services which will increasingly help to get rid, to some extent at least, of the bugbear of the waiting list, has led to an enormous increase in what is rather inelegantly termed the turnover of patients.

Here I think that splendid work has been done. Something like a quarter of all the capital sums which have been invested has gone to special departments of existing hospitals. The main object there has been, with our limited resources, to try to treat within those resources more patients.

It is not true that there has been no scope, though there has been less than I should like to see, for major capital works. There is a new dental hospital, and a very fine one, at Sheffield, which I visited recently. I laid in May of this year the foundation stone of a great new mental deficiency hospital near Southport. Only a week or so ago I opened a delightful general practitioner hospital at Tynemouth, and I am going in a week's time to York to open a big hospital development there. There has also been the important development which H.R.H. The Princess Royal opened at the Royal Infirmary at Hull. There have been big out-patient extensions in two or three of the great London hospitals of which the architects may well be very proud indeed. Every Regional Board has plans which it is anxious to see developed, and which in many cases are at an advanced stage.

There is, therefore, some scope—though not so much as we should like to see—for the big scheme. All those of us who have the best interests of the service at heart must hope that we shall be able to see in the future a big development in a field which sorely needs capital expenditure.

So far as I am concerned, the capital cost of the building is not my only and perhaps not even my main concern, because once a building is erected and brought into service there are, of course, maintenance costs to be met year after year. From whatever source the capital funds may come, the maintenance costs fall upon the Exchequer, which means upon you in your other capacity, not as architects or administrators but as citizens and taxpayers.

The constantly rising cost of the Health Service has given successive Chancellors a good deal of concern, as you know, and it was with that in mind that we appointed

the Guillebaud Committee some time ago to see whether there was any way in which such a rising charge could be avoided. Mr. Guillebaud has not reported yet, and no doubt it will be some months before he does so. I would not wish to prophesy about what he will have to say, but it is surely true that there are capital developments which not only will not add to maintenance costs but will do a great deal to reduce them. There is great scope for that in the hospital field, although that probably concerns the engineer as much as it does the architect.

I have said something about my second interest in being, as I am, a potential client of yours, the question of getting value for money. This is not just a financial matter, and it arises because I am responsible for the Health Service to Parliament and the country as well. Sir John Charles, my Chief Medical Officer, who is to read you a paper this morning, is going to deal in detail with the organisation which has been set up so that I may discharge my responsibilities as Minister in this field, but there is one development to which I think that I should refer, and it concerns the question of circulating information to you on various aspects of the Health Service—building design, construction and so on—which will reflect what is best in modern practice both in this country and elsewhere and provide for you some sort of guidance.

Up to now, as you know, my responsibility in this field has been discharged almost entirely by ad hoc studies of the various projects as they have arisen, and that process is one which will continue, but we think—and I understand that the Royal Institute agrees with us in this—that there would be advantage in the publication of such bulletins as I have mentioned to your profession. I always step very carefully when there is any suggestion of giving advice or guidance to a profession about professional matters, and I think it is right that a Minister should do so. In the preparation of these bulletins, of course, there will be the fullest consultation with people outside the Ministry, with doctors and others as well as architects, so that we may ensure that the best opinion is available on all the points dealt with. I should like to make it clear that the very last thing that I would seek to do would be to cramp your initiative in any way by a rigid prescription of planning details. On the other hand, there are some matters on which I think it would be valuable to you to have guidance, such as the question of space standards, for example. On these and other related matters I think that we shall be able to help. We are starting this very soon, and I have no doubt that from this 2-day Conference we are going to learn a great deal which will be of value to us as we seek to help you.

I said earlier that not all the money which is spent on capital investment in the health field comes from the Exchequer. We have recently been able to make a relaxation in this field which I hope is going to help a great deal, and that is to ensure that if such moneys for capital expenditure are

found from non-Exchequer sources—that is, from the private resources of the hospitals—it need not count against the capital programme of the hospital concerned. There are, of course, certain snags about this, the principal one being that capital investment in the normal way implies maintenance expenditure, often of a very substantial nature, in future years, which I shall have to meet; and it is essential for me, although I want to see great use made of this new provision, to bear in mind the burden which it may throw upon my resources after the capital expenditure has been made.

Hospital planning and design is no doubt a peculiarly difficult field for the architect. If we consider for a moment the ordinary house, there you have the plans, and you have the meeting of minds between the house-owner, and probably and rightly the house-owner's wife on matters which come within her province, and the architect; but when you try to design for a hospital you are trying to design for dozens of people of many professions and many different interests, some of which dovetail but some of which may well conflict. It is of the greatest importance that at all times we shall know the needs and the desires of those who will do the work, after your work is done, in those hospitals.

When I go to open any new development, I never fail to ask the people who are working there to what extent they have been consulted by the architect. I ask, for example, whether in the case of a new operating theatre suite the surgeons, the theatre sister, the nurses and all who work there find that the scrubbing-up rooms, the sterilising rooms, the changing rooms and the room for anaesthetising the patients are as they would have them, and whether they have had—as I am happy to say that in almost every case I find that they have had—a real opportunity of putting their views before you.

This question of cooperation seems to me to be a particularly difficult one in the hospital field, where so many interests are naturally and rightly involved. I take it that it is because of this that you are having papers read at this Conference by a doctor and a nurse. It seems to me that only if the ideas of the professions and of the administrators in the hospitals on the one side, and of the architects on the other, come together, and if necessary clash, so that we may see what differences of approach there are, shall we get the really satisfactory development which we want.

That is why I think that the idea of this Conference is such a splendid one. It seems to me, moreover, that it is being held at just the right moment. I have outlined to you some of the difficulties which exist in the capital investment field in regard to hospitals. We know, however, what has to be done; we know the great schemes which must be brought forward in this country, and it is wholly right that we should use this time which is available to us now to make sure not only that we are thinking along fresh lines, but also that our ideas, even if they are entirely in the

traditional field, do agree with the views of the professions with whose work you are so closely concerned.

Perhaps it is not so inappropriate as it may seem, therefore, that the Minister of Health should open a conference of architects. We have to work very closely together in this field, and I am quite sure that we are going to do so. I think that there are going to be splendid opportunities in this field, limited though it may be, for the sort of work that we want to see. I have no doubt that we in the department are going to learn a great deal from what you say. I promise you that we shall take it very carefully into our thoughts and shall do our best to learn from it. I am sure that you are going to have a successful Conference, and I now declare it open.

The President, in thanking the Minister for his inspiring address, referred to what he had said about the difficulty for an architect in dealing with blocks of clients. That was a difficulty inherent in the position today, when clients were so often numbers of public persons instead of single individuals. It was a difficulty, however, which had to be solved, and which with good will on the part of architects, administrators and all those concerned with hospitals or other public buildings could be solved to everybody's advantage. Given a good brief, the architect would do a much better building than he could without any reference at all to any of the persons who were going to use the structure.

The President was sure that the R.I.B.A. would welcome the proposal that the Ministry should issue some type of bulletin, which would not be a matter of hard and fast directives. That seemed to be one of the ways in which various items which had been discussed and solved, not necessarily with finality, could be brought to the attention of those who were interested.

## THE ORGANISATION OF THE HEALTH SERVICE IN RELATION TO THE PROVISION OF HEALTH BUILDINGS

by Sir John Charles, M.D., F.R.C.P., Chief Medical Officer, Ministry of Health

One must assume that the planners of programmes, like the prescribers of physics, are prompted by benevolent intentions and have a set purpose in mind. I make this preliminary observation in case there are any among you who wonder why it has fallen to a medical person to attempt some elucidation of a matter of organisation. Prima facie, the organisation of the Health Service in relation to the provision of Health Service buildings is a medically unpromising subject. Yet the conveners of this Conference were anxious that the surveyor of the site, as it were, should be from the medical side of the Ministry. Inasmuch as this is a recognition of the historical relationship of the physician to the hospital my profession is greatly honoured, and I am very sensible of the responsibility which rests upon me. Inasmuch as it represents a blind and trusting tribute to my versatility



I am deeply complimented but filled with trepidation.

Whether or no you accept the Greek tradition that Aesculapius, the God of Healing, was also the originator of the European hospital—a place filled in those days with all manner of surprises for the patient, a tradition to which I am afraid we still conform—does not greatly matter. There can be no question that sharing their interest with all sorts and conditions of men and women—the Courtier and Cleric, Rahere, the Squire and prison reformer John Howard, the financial magnate Thomas Guy—and with Florence Nightingale herself, the members of the medical profession both in the United Kingdom and abroad have played their part in the study of hospitals as structural and functional entities, as well as places in which they exercise their crafts.

Ninety-one years ago a physician John Syer Bristowe of St. Thomas's Hospital and a surgeon Timothy Holmes of St. George's prepared for the Annual Report of the Medical Officer of the Privy Council a 280 paged report on the hospitals of the United Kingdom. Even then in those pages they were debating the ideal forms that hospitals should take and were considering the several types—pavilion plans, H-shaped hospitals, corridor plans and variants of the same. And there was mention of 'spinal' walls, curtaining of beds, the eccentricities of positive ventilating systems, and finally a repudiation of the thesis that there are no good hospitals except those of modern construction. Bristowe and Holmes would have been welcome and knowledgeable contributors to your discussions today, and it is in their spirit of active and full co-operation with all other interested parties and persons that I would offer you this address.

I hope, however, that before I proceed to the body of the discourse I need not regard myself as called upon to speak at length upon the organisation of the N.H.S. itself. Now that the service has been in operation for more than six years I am venturing to assume that at least the broad outlines of its structure are well-known even to as unworldly a group of creative artists as is assembled here, especially as an elegantly drawn pictorial representation of that structure is on view as part of the exhibition associated with the Conference. Nor do I propose to discuss in general the merits and demerits of the present organisation; this has been and is being done almost tediously and even ad nauseam elsewhere and is I hope outside the terms of reference of this technical conference. What I imagine you will expect from me is an indication of the main ways in which the structure of the service impinges on the preparation and execution of building projects, of any problem to which this gives rise, and of what is being or can be done within the present structure to solve these problems; and this is what I shall try to give you. Thus the title of my talk should perhaps be 'The Provision of Health Buildings in Relation to the Organisation of the Health Service'.

It is I think necessary to distinguish for this purpose between the hospital service and the local authority health services, since the structure of the one differs from that of the other in ways which for the present context are material. (The third branch of the service, that which is covered by the Executive Councils, hardly comes into the picture since it does not need to concern itself separately with the provision of buildings to any marked degree, except perhaps health centres, which are primarily the business of the local health authority.) I shall deal first and at greater length with the hospital service, since this is the service that takes the bulk of the capital provision and since it is clear from the papers which have been circulated that—no doubt for just this reason—it is the service in which this Conference is chiefly interested.

The position on the hospital side can be summed up quite briefly by saying that the provision of buildings in England and Wales is the responsibility of the Minister, working through the fourteen Regional Hospital Boards and the thirty-six Boards of Governors of Teaching Hospitals. This broad generalisation underlines the two crucial features of the organisation—first that the work is centrally and directly financed from the Exchequer—and secondly that planning is done on a national and regional basis and not on the basis of the smaller unit, the Hospital Management Committee.

This brings us straight to the central organisational problem—a problem which arises all over the service and not only in relation to the provision of buildings—that is, the problem of reconciling central and regional control with local and artistic independence; and I suppose it is true to say that from the organisational point of view this problem dominates the scene which this conference is to survey. Two aspects of it must of course be disentangled, the strategic and the tactical, the planning aspect and the design aspect. The planning aspect is probably not of great interest to the present gathering and I don't propose to dwell on it except in connection with the financial system, which I shall come to in a moment.

Probably no one would seriously dissent from the view which was taken at the outset of the service that the decision what buildings should be erected must be taken with reference to a broader field than the individual hospital or even the individual Hospital Management Committee. Someone must be in a position to balance the claims of one hospital for a new operating theatre, for instance, against the claims of another area for a new out-patient department or a new boilerhouse, and I have not heard any serious criticism of the Regional Boards as the right bodies to exercise this discretion (though there is naturally plenty of criticism from interested parties about the way it is exercised in particular cases). With the bigger projects of course decisions must be taken with reference to a wider area still—when for instance the need for a new hospital for a new town must be compared with that for a new hospital for

an existing area, previously lacking, or when, as recently, the special needs of one particular branch of the service over the country as a whole need to be given special weight. Here the Ministry must come in. By and large, however, the planning is done by the Regional Boards, who receive annual allocations of capital money from the total sum voted by Parliament for capital development in the hospital service and whose programmes have rarely been challenged by the Ministry in any significant way.

Certain broad priority categories have been laid down—building for the mentally ill and mentally deficient is an obvious example, and building to economise in revenue expenditure is another—but these cover a very wide field, and I do not think any Board has found it irksome to frame its programme with due reference to these priorities. Boards of Governors are of course outside these regional programmes and to this extent planning is not truly regional, but the extent of the capital development undertaken by the teaching hospitals is not great enough to throw the picture seriously out of balance.

All this is probably not of very great interest to the architect, unless he happens to be one of the fourteen specifically concerned with the framing of Regional Board programmes; but there is an aspect of the planning of capital works without reference to which I cannot leave this part of my subject, and that is the effect on planning of the present system of financial control. As I have already mentioned, money for capital development in the Health Service, as for other Government expenditure, is voted by Parliament annually, and programmes must therefore be prepared on an annual basis—which is, it may be considered, not the ideal way of handling capital works. Expenditure on any given project in any given year is very difficult to estimate with any precision and to make it correspond to a sum stipulated in advance is practically impossible. Further, a great many capital works take well over a single year to complete, and once a programme is launched a Board may well be committed to expenditure a year, two years or even further in advance of the year for which money has been voted.

There is of course some substance in this criticism, but there are ways in which part, at any rate, of these difficulties can be overcome. The second difficulty, indeed, is more theoretical than real: although money is in fact voted annually, it is clearly necessary for certain assumptions to be made about the sums that will be available in future years: and in fact it is now the normal practice for capital allocations to Boards to be announced in the summer before the year to which they relate, with the proviso that they are subject to approval of the Department's Estimates by the Government and by Parliament; and Boards are asked to assume for further years that a similar amount will be forthcoming. Allocations on this basis for the financial year 1955-56 were announced on 17 August 1954.

There are still two drawbacks even so—

first, if an unexpected reduction in allocations has to be imposed at short notice it may dislocate programmes and indeed not prove fully effective; conversely a rapid increase in the rate of capital expenditure will not be easy to achieve. These difficulties must, for the present at any rate, be accepted as inherent in the organisation of the service: the second, fortunately or unfortunately, has so far been largely academic.

To the difficulty of making capital expenditure correspond to annual estimates there is no easy solution, but continuous watch on the progress of the programme throughout the year, together with on the one hand the maintenance of a reserve of funds to cover overspending and a reserve of works ready to be undertaken at short notice to take up any underspending, can do a lot to achieve the objective.

So much for the strategic or planning aspect of hospital building. I have not covered it in anything like complete detail and do not propose to do so—I have not dealt for instance with the organisation within the Regional Hospital Board or with the place of the hospital and the Hospital Management Committee in the larger organisation. It is high time I passed on to what I take to be the principal interest of this gathering—the organisation of the hospital service as it affects design of hospital buildings.

It is here that the tension between central control and local and individual interest becomes noticeable. You have heard the Minister speak of his responsibilities in this connection. Not only must he answer to Parliament for every penny of the money spent—and he must account separately for the capital expenditure: he also has the wider responsibility of ensuring that the service functions with the maximum efficiency and the maximum benefit to the patient. To assist him in discharging these responsibilities he has a staff of medical, technical, administrative and financial officers, and it is the duty of these officers to examine all capital projects of any size on the Minister's behalf. Here one would have thought might be a fruitful ground for difference of opinion and dispute, at any rate on the medical and technical side, when those whose duty it is to project the scheme are on the opposite side of the table from those whose duty it is to criticise it. I think it says much for the forbearance of all concerned that so many projects go through so smoothly.

We naturally do not set ourselves up as the repositories of all wisdom in hospital design, but our wider orbit has perhaps enabled us to accumulate a certain amount of experience which we can usefully bring to bear, and it is very rarely that we meet with resentment or professional touchiness from those whose plans we scrutinise. The process does take time of course, especially with major projects, but we have worked out a procedure for the submission of schemes at successive stages of preparation that can reduce the delay to the minimum, and if it is allowed for in preparing capital programmes, and projects are submitted in

good time, no disadvantage should result. If of course a scheme is brought right up to the final stages before we see it and then comes to us in the expectation that we shall clear it overnight and give it our blessing some heartburning may well result. But even worse indigestion might follow if we were to attempt to do so. These remarks apply of course mainly to schemes of a significant size or otherwise of special interest, since we do not normally expect to be concerned to any great extent with the details of the design of any project that costs less than £10,000.

This interposition of the Ministry as approving authority for hospital capital works does give rise to one or two anomalies, for instance in contractual matters. In the form of contract which has been drawn up by the Royal Institute (specially adapted for the use of local authorities) and which we have recommended hospital authorities to use, there is of course no mention of the Minister or the Ministry: the Regional Board or Board of Governors is the employer, and certain matters under the contract are at the employer's discretion. On a strictly legal view, I believe, the Minister has no locus, and for obvious reasons it would not be practicable, generally speaking, for the Ministry to become party to the contract with all that this would entail; yet fundamentally it must be accepted that the Minister is in a sense the employer. We can therefore only rely on the good sense of hospital boards and their officers to acquiesce in such diminution of their contractual authority as will enable the Minister, behind the scenes as it were, to discharge his own responsibilities in relation to capital works; and by and large this situation has been accepted. As with the approval of plans, goodwill on both sides is the vital ingredient.

There are, however, obvious advantages in the advance dissemination to those responsible for planning hospital buildings of as much information as possible about the views held in the Ministry on the subject, and the Minister has already announced the arrangements we are making for this purpose. I need say no more about these arrangements except to emphasise two points: first, the bulletins we produce will not just be the expression of the personal views of Ministry officers, however well-informed and experienced, but the distillation of the best opinion and practice throughout the professions, overseas as well as in this country: and secondly, what we aim to do is not to produce standard hospital buildings for all occasions but, in the words of Mr. Llewelyn Davies, 'to provide the practising architect with the tools of design'. I am sure we can count on the profession's wholehearted cooperation to this end.

Up to now in this part of my remarks I have been dealing with matters in which my Ministry are directly concerned. It is with some trepidation that I now venture upon an aspect of the subject that only exceptionally, and inadvertently, forces itself on our notice, namely the organisa-

tion for hospital design at the level of the Regional Board or Board of Governors. My only reason for doing so is that it is at this level that the interaction of medical, nursing and architectural thought is most noticeable, and no talk on the subject would be complete without some reference to this.

A building project may of course originate in a variety of different ways, from a Hospital House Committee, from a Hospital Management Committee, from a Board, or even from the Ministry, but once it has been accepted as a serious candidate for a place in the capital programme its translation into bricks and mortar becomes an architectural problem and an architect must be appointed to draw the plans. The earlier the architect is brought in once the project has been accepted the better, for it is certain that it will be the architect's structural considerations and conceptions as much as anyone's that will mould it into an intelligible shape, and it will cramp his style severely if the thing is too cut and dried before it reaches him.

The way in which the architect fits into the organisation will depend to some extent on the question whether he is in private practice or on the Board's staff—and perhaps I might take the opportunity to say here that we in the Ministry have no wish to see any reduction in the use made of the services of private architects for hospital work—but happily it is no part of my business this morning to lay down the law about the arrangements that should be made. I would only say that two things seem to us to be important, first that the architect shall have ample opportunity for consultation with those who will run and operate the building when it is finished, and secondly that he should have ready means of ensuring at all stages that what he is doing is in accordance with the wishes of the Board, who are responsible for the scheme, who can see it in its place in their programme and in relation to the other schemes in their region, and who will have to keep the Ministry in touch.

The second objective may be easier for the Regional Board architect to ensure than the private architect—but whichever he is, there is a great deal to be said for the sort of small committee mentioned by Dr. Davies in his paper, which can bring all the interested parties together and focus their experience and creative imaginations. But no amount of organisation will make the wheels turn smoothly unless the individuals concerned bring to their tasks a spirit of ready cooperation and a realisation that they may not necessarily know all that there is to be known about the design of a building for the purpose in question. I fully recognise that this requirement applies to the officers of the Ministry no less than to others and I hope that we shall never lose sight of it.

Before I leave the subject of the hospital service I must mention one other aspect of it, namely the provision of buildings financed from non-Exchequer funds, that is to say from endowment funds, donations and so on. From the organisational

point of view the only significant distinction between these and Exchequer-financed buildings is that expenditure on them does not count against the capital allocation of the Department or the Board, and thus does not have to compete for a place in the programme with the generality of capital works. Otherwise, if the building is to form part of the Health Service for which the Minister is responsible all that I have said about planning and design applies, since the Minister might ultimately have to answer for the use that is made of the building no less than of buildings provided at the expense of the Exchequer.

I warned you at the outset that I should be dealing at greater length with the provision of hospital buildings, and I find in fact that I have left myself very little time to say anything at all about the local authority side. This may not matter so very much because local authorities exist for other purposes than the provision of health service buildings, and the pattern of organisation for local authority capital works which has long been familiar presents no new features in relation to health service buildings. The big differences from the hospital organisation are that only half the cost of the works, instead of all of it, is met by the Exchequer, the other half being a charge on the local rates, and that the Minister has not the same direct responsibility for administering the services provided. Nor is there the two-tier regional and local structure that we find in the hospital service.

The organisational picture is thus a good deal different from that of the hospital service, but there is quite a family resemblance in many ways. For instance, the Ministry likes to be brought in as much as possible on the planning of major projects, and we hope to cover local authority buildings in the arrangements we are making for the issue of bulletins on design. And in spite of the absence of the two-tier structure the same problems of human relations, I am sure, arise at the local authority level when the plans are being prepared. The provision of a health centre for instance must be a very delicate undertaking, calling for the canvassing and reconciliation of a variety of different 'user' interests; similarly with other buildings which feature in local authority works—maternity and child welfare clinics for instance, which form the biggest part of current programmes.

Local health authorities are asked to inform the Minister annually of the building work which they wish to carry out in the following year. The Minister's control over the amount of work done is exercised by the statutory requirement to obtain his consent to work costing over £10,000 and by the long-established procedure of requiring consent to the borrowing of money by local authorities, which is the means by which most capital works are financed. Before either of these consents can be given the Minister must clearly be able to satisfy himself that the project in question attains a reasonable standard of design and is not unduly costly. To this end formal submis-

sion of schemes is generally preceded by discussions between the local authorities and the Ministry's officers so that schemes which are agreed to be urgently needed and which can be fitted into the annual programme are approved in principle before detailed planning proceeds. National investment considerations, along with the need to keep down the rates, impose restrictions which are no less cramping than in the hospital service and they mean that only a small part of the demand can be met.

With this very brief sketch of the local authority picture I come to the end of my allotted task. If any central theme can be said to emerge from my somewhat disjointed remarks it is, I suggest, this: that the Health Service is not organised in such a way as to enable buildings to be provided at the greatest possible speed and with the maximum convenience to the architect because—to adapt a Biblical phrase—the buildings are provided for the Health Service and not the Health Service for the buildings, and it would not be reasonable to expect the structure of the service to be dictated by building requirements. But—and I would emphasise this—a very great deal has been done by the exercise of commonsense and administrative ingenuity at all levels to solve the problems that the organisation presents. And above all, here as in so many fields, it is in the last analysis the goodwill of the individual that is the vital lubricant in the successful working of the machine.

In conclusion I should like to echo the Minister's hope that the other professions interested in hospital planning, as well as the architects, will make their voices heard at this Conference and that a fruitful synthesis of ideas may result.

#### Discussion

**Mr. W. A. Guttridge [F]:** I should like to refer to the great difficulties which even the private architect has because of the practice of dividing expenditure into twelve-monthly periods, which bear no relation to the speed of planning or building. Strangely enough, as the end of the year approaches some hospitals ask us to slow up construction, while others ask us to speed it up, in order to meet their financial programme. Either contingency is regarded by the builder as an excuse to claim additional costs, and the cost of building goes up accordingly. Is there any hope of adopting the university system, which we also use on other commissions, of a quinquennial allocation? That is a more reasonable period to take for building schemes.

**Mr. J. E. Stone, C.B.E.:** It has been suggested this morning, and is also suggested in Dr. Davies's paper, that the best way of getting a programme going is to appoint a committee. In my experience, that is the last thing which should be done. The best method of getting a programme going is to put an administrator and the architect together in a room and leave them there until they have got out a

basic programme, and only after that to get in touch with the medical and surgical officers, nursing sisters and other members of the staff. I had the privilege of helping in the planning of the last hospital to be built in this country before the war, the Queen Elizabeth Hospital at Birmingham. The method we adopted there was not to form committees, but to get together three surgeons, three physicians, three matrons, three sisters and three junior nurses, and also to consult the porters and scrubbers and the girls who prepared the food in the kitchen. After discussing things with them we gave them outline plans, mere sketches, and told them to look at these for a week or two and give their views, which were then incorporated in better drawings. They were given these to take away for a month, and told that at the end of the month they would be expected to sign them, and that after that no alteration of any kind whatever could be made. After the foundations were put in no alteration of any kind was made, and we estimate that something like £120,000 may have been saved on that account. You should get the programme out and get everyone interested to sign the drawings, and after that you will have no trouble.

**Sir Arthur Stephenson [F]:** It seems to me that direction from the top is sound. I have been to a number of regional centres in England and to one in Scotland, and I see the difficulty of thinking in terms which go beyond rigid traditional forms. We have to see beyond these restrictions and try to plan in a way which will be in better accord with progressive thinking in the world today. We are often told that people do not like to do this or that, and when we ask why, we are told 'It is not done in that way'. When considering plans for hospitals we must be freer in our thinking. It is proper that the Ministry should take account of what is going on in South America, in the U.S.A., in Africa, New Zealand and Australia, not as showing what should be done here, but as illustrating the thinking which is going on outside the confines of tradition. We should thank heaven for tradition, but thank heaven also for an opportunity of applying it in a rational way. It must be applied in a rational way when we are dealing with hospitals. The more you travel round the world the more you realise that those of us in the English-speaking countries have a tremendous responsibility for the guidance of health policies. When I have an opportunity of discussing the papers by Mr. Llewellyn Davies and Mr. Molander I shall be able to give specific instances of what I have in mind. Now is the time for the British peoples to have an interchange of thought and of the expression of their thinking. I should like to point out that it is just as far from Melbourne to London as it is from London to Melbourne.

**Mr. S. W. Barnes (House Governor, King's College Hospital):** From my experience of more than thirty years of the building of hospitals and association with



architects and others, I would say that if you have a committee you will get the sum total of all the requirements of the various departments, and the cost will go up enormously, so that somebody has to take action to bring it down. In my view, Mr. Stone's solution is the correct one; to start with you must have collaboration between the architect and one other person, who may be the chairman of the building committee, or someone like Professor Vines, or the house governor, or anyone else for that matter. When the architect and this representative of the Board have arrived at a broad outline of what they think should be done you can call in your surgical specialists, your matrons and your nurses to comment on the proposals; but if you have a committee at the outset you will get a monstrous structure which the country cannot afford, or you will have to start all over again.

**Mr. Raymond W. Walker [L]:** I am a third class of architect, called a Licentiate, which perhaps allows me a little poetic licence. I am taking the liberty to speak because if it had not been for the hospital services I should not be here now. I am a very poor type of architect, and not physically very fit, but I am a great deal better than I was before I went into St. Bartholomew's Hospital. As a former patient with a little architectural background in one of our very best hospitals, I can assure you that I only wish that a forbear with equal experience had been able to make some suggestions years ago! I feel it would be a lovely idea if, since we have nearly burnt down one post office, we could burn down another which is just behind St. Bartholomew's Hospital and keeps a great many of the patients awake at night. Town planning should be applied to the location of our hospitals. We are very much richer than the Chancellor of the Exchequer lets us know, and I think it would be a good idea to take certain hospitals which are not in a very suitable place and put them somewhere better, converting the valuable sites which they at present occupy into more post offices, for which I am sure that the Postmaster-General would be willing to pay enormous prices. That would solve a large number of problems. Whatever you do, however, do not forget that the patient is the really important person in all this business.

**Mr. Eric D. Maidment [A]:** Two factors in particular have been mentioned this morning. One is capital expenditure, a question which is always with us, and the other is time, which should be subdivided into time of designing and time of building. Far too much time is spent in designing a hospital and far too much time is spent in building it. Some research work has been done with a view to analysing the various types of room required in all sorts of medical buildings from health centres to large hospitals, and a series of standardised units has been evolved related to a modular system which in turn is related to an advanced form of construction. Often when designing a hospital a great deal of

time is spent in talking to the people concerned, with the result that you may have a grid of 21 ft. in one building and of 20 ft. 6 in. in another; one person says that the sluice should be 140 sq. ft. and another that it should be 160 sq. ft. Does it matter which dimension it is? What is far more important is to have a standard sluice and standard rooms which in turn can be related to a grid which is based on a module.

For the module, 3 ft. 4 in. is popular this year, but 3 ft. 3 in. may be preferred next year for some fantastic organic reason. However, let us take 3 ft. 4 in., which is not far off the metre. The various standard units are related to a basis of 3 ft. 4 in., which in turn is related to a form of construction which is rather more advanced than our reinforced concrete and steel buildings—which, incidentally, will make wonderful ruins! This form of construction is based on new types of metal sections which can be erected very quickly and are themselves components of standardised units.

The net result is that you can take a hospital and put all the various units together, and they automatically 'click in' with the standard framing. There is a substantial reduction in the time taken to design and construct the building, and the cost of the building shows a saving of about 20 per cent, despite the fact that its standard of finish and layout will be as good as that of a building of any other type. Linked with this modular approach to both planning and construction—and not just planning or construction—when you have finished you have a shell which you can extend or reduce, and within that shell you can change the use made of it. What we want is a building with a series of rooms which can be altered at will, rather than wards with a particular use. I know that there can be difficulties with the services, but if the facilities for providing services are also on a modular basis it is possible to design a building without being hampered by service restrictions.

**Sir John Charles**, replying to the discussion, said: Mr. Guttridge raised the type of question which a person like myself cannot be expected to answer. Obviously in the Government we do know the advantages which the quinquennial arrangements of the University Grants Committee have and how useful they can be. I cannot speak on behalf of the Treasury, but I should like to point out that an expenditure which at its maximum, in the case of the University Grants Committee, amounts to £25 million a year is a very different matter from a quinquennial arrangement for a budget which, over the whole of the Health Service, is now creeping up to £500 million a year. Nevertheless, this idea of planning over a longer period is one which has been raised in the evidence given by a number of bodies before the Guillebaud Committee. More than that I can hardly say at the present time. I have attempted in my paper to indicate that our arrangements are a little more flexible than appears on the surface, but perhaps they are not flexible enough.

Sir Arthur Stephenson touched a very responsive chord in my heart. We must realise that hospital building in particular before it comes into use has gone through a long gestation period, which may amount to five or ten years. Every one of these buildings, as a distinguished architect said many years ago, has already deteriorated by the time it is taken into use, and therefore Sir Arthur's plea that we should keep in touch with the movement of men's minds all the time is a very important suggestion. It is important to see how things appear on the surface, things which have been accomplished and brought to fruition, but it is much more important to know what is going on inside the minds of X and Y and Z, whether they are in this country, in Europe, in the Commonwealth, or in the United States. It is only by remaining in touch with those movements that we can make real progress.

**AFTERNOON SESSION, 21 OCTOBER.**  
**Mr. J. H. FORSHAW, C.B., M.C., M.T.P.I.,** Chief Architect to the Ministry of Housing and Local Government and to the Ministry of Health, in the Chair.

**Mr. Forshaw** said they were to have two interesting papers that afternoon. Mr. Molander had come specially to England for the Conference and was leaving the following day to return to Sweden, so that they had particular cause to be grateful to him. They were also fortunate in the presence of Sir Arthur Stephenson. In the exhibition which was being held in connection with the Conference there were drawings and photographs of a very fine group of hospitals which were the work of Sir Arthur's office in Melbourne, Brisbane and Sydney, and which were representative of all the good work which Sir Arthur had done 'down under'. They were also grateful to Mr. Birch-Lindgren, who had come specially from Sweden to speak on the second paper.

**Mr. R. Llewelyn Davies**, in presenting his paper, said that there was grave difficulty for the architect unless he had, and shared with his client, a deep understanding of the inner life of the building he was attempting to design. One of the great problems which faced both client and architect in hospital design was to reach this fundamental understanding. It was not only a matter of architectural knowledge; it could be built up only by the architects, engineers, doctors, nurses, administrators and indeed the patients, thinking together and discussing the problem.

But an ad hoc solution for a particular building was not the whole answer. We were not getting, by and large, an architectural quality, a synthesis, a contribution from our profession to hospital architecture, which was quite good enough.

In America, their method seemed to be to try all possible solutions because one of them must be right. It was easy to laugh at this but it did produce richness and variety, even though it was rather expensive. In America he had found, recently, a



Fig. 1. A typical 'Nightingale' ward

general opinion that this method was not meeting the bill, and there was a feeling that more organised and continuous study of the sort which we had already begun in England was desirable. Indeed, the Americans already had a word for it—'multi-disciplinary'!

Mr. Llewelyn Davies then showed a number of slides. He suggested that the Nightingale pattern ward (Fig. 1) was worth a little thought. The picture gave a 'sister's eye' view of the ward. None of the patients was ambulant. The ward reflected the concept of nursing which originated with Florence Nightingale, and which historically had been of immense value. The two main ingredients were discipline and ventilation! Architects had been able to understand those concepts and to express them clearly and directly.

Miss Turner in her paper mentioned that as a nurse she had worked in such a ward and found she had to walk considerable distances. A slide (Fig. 2) showed the walking done by a nurse in such a ward, every single line representing a journey. There were several hundred journeys, amounting altogether to nearly three miles for a first-year nurse; but the further one rose in the nursing hierarchy the shorter became one's walk. The diagram showed that the journeys from bed to bed were an important ingredient in the total, almost as important as those from any single bed to an ancillary room.

Mr. Llewelyn Davies then illustrated the plan (Fig. 3) of an experimental ward at Greenock. It reflected some of the nursing studies recently carried out. The plan contained 20-bed units, each in charge of a nursing team. Each had its own nurses' station, its own sluice and ancillary rooms, but two of these units shared the larger and more important ancillaries. It was not put forward as an ideal but was an experiment. A picture of life in one of these experimental units (Fig. 4) was drawn from the 'patient's eye' view. This represented a certain shift in thinking about ward layout: the thinking was now about the patient and what he was going to see.

In the old-fashioned out-patients' department (Fig. 5), where there was no appointments system, the patients sat on benches which had to be very smooth and devoid of arm-rests because the queuing system was to slide along the benches until one reached the door of the clinic. Out-patients still had to wait for a considerable time in some

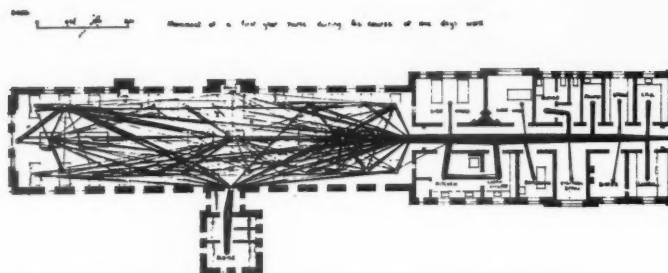


Fig. 2. Cotton trace of nurse's movements in a traditional ward unit

hospitals, and it was not possible to ensure that the doctor would never be kept waiting unless some patients were. Nevertheless, if the doctor was prepared to run the risk of losing perhaps two minutes out of 24 hours' solid consulting work, it was perfectly possible to have appointments and to cut waiting time down to quite a small figure. There was no need for the old type of waiting hall at all. The little Corby Health Centre (Fig. 6) reflected some of the studies which Mr. Llewelyn Davies had described. It had small separate waiting spaces, pairs of consulting rooms and single examination rooms.

The hospital was built up of a number of individual departments, each of which could be studied in the ways he had indicated. The subject to be discussed was not so much the planning of individual departments as their relationship to one another. In his new hospital at St. Lo, the American architect Paul Nelson (who practised in Paris) had grouped his wards vertically and had arranged all the other departments of the hospital horizontally. That broad concept was reflected in the design of the new hospital at Swindon and that of many new American hospitals.

All research into function had really only one object, to help hospital administrators, doctors, nurses and architects to get a broad general view of what happened. It was not directed to producing an individual or ideal solution. There was need for many solutions to hospital problems; there were no cut-and-dried answers to the design of a hospital or of an individual unit. It was hoped to see the maximum variety developing in the next few years, but an informed variety, based on knowledge of what was happening.

**Sir Arthur Stephenson [F]:** It has been a great pleasure to hear Mr. Llewelyn Davies describe the functions of the Nuffield Foundation, which is carrying out its functions as an advisory body in a very clear-thinking way. At present there is no organisation in this country which can speak with one voice on these matters, and I feel it is the responsibility of all of us to see such an organisation is formed.

The essential problem in all industry—and hospitalisation is an industry—is that of competent management. Hospitals are built only because patients require treatment. Because patients require treatment we must have people trained in the medical service, and that is the second function of

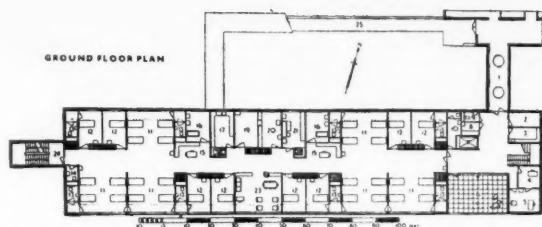
the hospital. The purpose of the management side is to reduce costs to a minimum. We all know that it costs so much to keep a patient in bed and so much for him to be away for a time from the activities of the community, but we do not seem to appreciate fully the fact that our hospitals present a management problem. Industry pays the greatest possible attention to management as a profession. We who are in the hospital business know that management is a profession and must be given a higher grade than at present, because that is where real economy will start.

We architects are servants, and it is our responsibility to serve our client well. To do so we must know something of our business and something of his requirements. It is our responsibility to know more and more of his requirements, because we are servants of the public as well, and it is our money and the patients' money and everybody else's money that is being spent.

Having cleared the decks in that way, the various services in the hospital must be analysed. The way in which these research committees have put forward their recommendations for the analysis of the different departments is excellent, but there are three things which really govern us: the economics of planning, the economics of operation, and the economics of maintenance.

So far as the economics of maintenance is concerned, I would remind you that quality is appreciated long after cost is forgotten, and we must start with the maintenance of the hospital in our minds. So far as the economics of planning is concerned the first principle, as I see it, is to decentralise the nursing service and to centralise all administrative services. Decentralising the nursing service if carried to the point of absurdity means that the nurse does not have to walk any distance at all from the patient. You must be practical, but you must remember that the real economies in the hospital are those which affect labour. There is no substitute for individual effort or for a well-trained nurse or doctor, and therefore we must think in terms of the economics of personnel.

On the economics of operation I can say with authority, and from distressing experience, that one thing which we must study in this country above all others if we are to have effective operation of our hospitals is efficient equipment. We must see that the nurse has proper equipment to work with, and in terms of centralising



Above: Fig. 3. I.F.D.H. experimental ward at Larkfield Hospital, Greenock. Right: Fig. 4. A patient's eye view in the ward

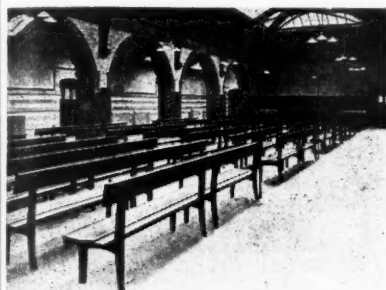


Fig. 5. Traditional out-patients' waiting hall

administrative procedures we must see that suitable equipment is available.

I have recently spent a little over a fortnight in Germany under the auspices of the German health authorities, and I find that the tendency there is to have what I call centres of authority. I do not agree with this idea, and a time will come when they will not agree with it either, but they do not know that yet. The professor is a very important person; he is master in his own sphere and brooks no argument, and that is true of every specialist. For us the integration of the services of the hospital is of the first importance, and each department must be made to fit into the whole.

It is surprising to see the extent to which the Germans have developed certain types of equipment since the war. Although some of it is built like a battleship, we do not have to copy that. We as architects have a responsibility to change the thinking of the people who produce this equipment and give them a lead, and a lead is being given by the Nuffield Foundation and by King Edward's Fund and other central bodies. We should, however, speak with one voice and not with many. The world is not a very large place, and we should study it, not with a view to finding support for what we happen to think, but in order to see what others are thinking. It is thought which produces action.

The other day I went to a hospital which has already been built but not yet opened and I saw some steel equipment with a heavy lid which the nurse had to lift to put in bedpans and so on. That sort of thing went out with the ark, and yet we are having to pay for it today. In another place I asked what a certain room was for and was told it was for the clean linen, but it was not hospital linen; each person in the hospital was responsible for his or her own linen. The centralising of the laundry service started in Paris before the first world war, and it is a true economy to get the hospitals

to accept a standard type of linen, a standard sheet and so on. If we are going to save money, we must start with management and go on from that point.

The centralising of equipment, its standardisation and development should be the special responsibility of some organisation, and through the Royal Institute I think that such a committee could be formed. We must not think that we as architects can be responsible for one section of hospital development and somebody else for another because that can only lead to failure. Architects must be responsible for the planning and equipment and the mechanical installations and engineering services in connection with it, and it is most important that they should have sufficient knowledge to control the whole operation and development. Let us use common sense and put in decent lifts, and do not let us listen to any suggestion that anything but the best should be used for transport, vertically and horizontally.

On the subject of maintenance, I recently saw that most attractive building, the Alexandra Hospital. The architect and the others responsible must have had these matters in mind, but prejudice or tradition or something else seemed to have prevented them from realising that distances of travel militate against economic maintenance more than anything else. By maintenance I

refer to running costs, operating costs, maintenance of building and equipment and so on. In all our planning we must have in mind what it is going to cost to run the institution and how many people will need to be employed in it in various capacities. We must know that it is going to cost so much per square foot to clean the wards, to clean the windows, and to clean the corridors. We must beware of committing ourselves to anything which will involve extravagant maintenance. I speak from forty years of experience—bitter experience, very often.

Mr. Guy Aldis [4], Architect to the East Anglian Regional Hospital Board, said he was anxious to see further results from the research work which was being carried out. It must have been extremely difficult for the investigators to avoid confusion, because there were not many districts with identical medical needs, and no two hospitals could be the same either in size or in the service which they provided. The problems in a hospital with 50 beds were very different from those in a hospital with three hundred, and bore very little resemblance indeed to the problems of a hospital with five hundred beds or more. A principle which was acceptable in a 50-bedded hospital might well be unsuitable for one with five hundred beds, and vice

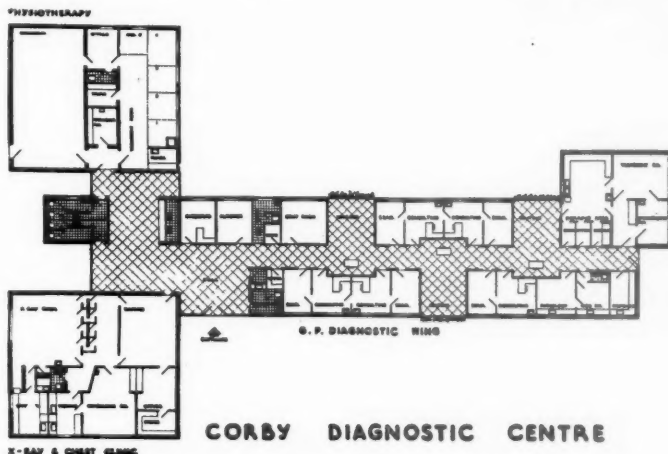


Fig. 6. Diagnostic centre, Corby. General layout



versa. There was great need for an assessment of medical requirements which would make it possible to determine the scope of the accommodation to be provided in any district, and he hoped that Mr. Llewelyn Davies would be able to work out adequate formulae and obtain complete agreement from the medical staffs concerned.

Mr. Aldis said: The advantages of this to the community are obvious, and in addition it should bring relief to the architects, who should be able to prepare in confidence sketch plan No. 1 knowing that there are not 99 more to follow. It should also bring peace of mind to the medical staff, who may otherwise suspect that they are being diddled out of accommodation.

With regard to daylight in hospital rooms, more often than not a great deal of glass is provided, but often in the wrong places. When a sick patient gets over his crisis and is once more able to take an interest in things, he will be fortunate if he can see anything outside other than passing clouds, due to the high glass line. With the advent of early ambulation, there is an inclination to say that the patient's stay in hospital is now so reduced that this does not matter, but even one day can seem very long when one has little to occupy one's mind.

When I first delved into hospital architecture I became disheartened because I realised that I could not grasp the whole without a very good knowledge of the parts which went to make it up, and when I studied these parts I realised that I could not appreciate them without a good understanding of the whole. I mention this because Mr. Llewelyn Davies has said that apart from the children's ward and the maternity ward there is no reason why the same ward plan should not be used for all departments in an acute general hospital. If he is prepared to study the individual requirements of all other ward units, perhaps 16 in number, and produce a typical plan which will meet each and every need I think he may be correct, but if his intention is to base all other ward unit requirements on a typical surgical or medical ward, I suggest that he is incorrect.

With regard to flexibility, many people have expressed the view that a hospital is out of date even before it is completed. The primary alterations are brought by new techniques and scientific discoveries and the need for additional accommodation to undertake new methods of treatment. The immediate dangers lie not so much in the ward units as in the out-patients' department and the special departments such as X-ray, pathology, and so on, with possible effects on the major operating theatre suites. On the whole I agree with Mr. Llewelyn Davies that flexibility, which is essential, is probably best achieved by having self-sufficient small parts the use of which is interchangeable. The architect must be given all the assistance necessary to make this possible. It is a pity, therefore, that operating theatres must have a ceiling height of 12 to 15 ft., which immediately ties the architect's hands. Would it be possible for Mr. Llewelyn Davies and the

Birmingham Regional Hospital Board to consider a floor-to-ceiling height of 10 ft. in their experiments on operating theatres? If this is found to be satisfactory, it will make a contribution to flexibility in hospital planning, and make the location of theatre suites possible at virtually any point on any floor, as well as making possible the economic stacking of theatres.

The paper rightly deals in the main with grand new structures, but we must take account of the financial position of the country, and the whole field of hospital architecture is vast. To mention one detail, in our homes we occasionally turn a blind eye to dust, but for many reasons dust cannot be tolerated in hospitals and great pains are taken to remove it. In this matter the architect carries a great responsibility to see that all his detailing is designed to reduce to the absolute minimum the crevices and ledges which harbour dust. I recently inspected a building with an area equivalent to about three ward units and asked how they managed to keep it clean. The reply was that 15 charwomen were employed for four hours a day and five days a week at 2s. an hour; an annual cleaning bill of £1,500.

Dr. C. T. Maitland, of the Ministry of Health, said on the subject of the estimation of demand, architects should not expect too much from the researches which were being carried on. Mr. Aldis had expressed the hope that Mr. Llewelyn Davies would find some completely satisfactory formula, but there would never be a formula which was completely satisfactory, and the doctors themselves could not prognosticate what would happen.

There is (Dr. Maitland pointed out) a distinction between demand and need. I have lately become a grandfather and have observed that the feeding on demand of a young child does not connote the same thing as the need of the young child. At the moment the method of feeding on demand is very popular, but it is not susceptible of any formula. The incidence of disease, he said, varied. Hospitals which had been filled with cases of infectious disease in his youth were now empty, or half-empty. Diphtheria, which used to kill thousands of people, now produced only a handful of patients. It was difficult to fill some children's hospitals. Many years ago a medical clinician in New York had told him that they did not need in America the number of children's beds at their disposal, and that in any case children should be nursed at home. That had been found in England. The numbers of the aged, on the other hand, were mounting, and if people insisted on smoking cigarettes there was a chance that they would need attention, before they were carried to their last home, in a chest clinic. Chest clinics were expanding and required highly-paid personnel and elaborate facilities to deal with troubles which, if the community showed wisdom, might be largely reduced.

On the question of stacking wards, Mr. Llewelyn Davies had mentioned some of the advantages and also the disadvantages.

Regard should be had to the 'liveability' of the hospital and the desirability of a friendly atmosphere, and also to the economics of the question. When he and others had been in Paris not long ago, an eminent hospital authority told them that the management of a certain very large hospital with a battery of 12 lifts had not published figures on the economics of lift running and maintenance, and that might be worth going into. A not altogether complimentary reference had been made to the Alexandra Hospital, but the promoters of the scheme used there regarded the securing of flexibility as one object of the design. Nine years ago in New York the Chairman of the Town Planning Commission there, a civil engineer, said that what was wanted was a core of engineering services and round them a space which could be filled in whatever way was desired. That was attractive in theory, but with a high vertical building the core would be surrounded by a somewhat rigid outline. At least the core in the Alexandra Hospital was thrown on its side and could be surrounded by light and replaceable buildings.

Professor Basil Ward [F] said that his own hospital work had been rather specialised. He greatly appreciated Mr. Llewelyn Davies's work and was glad to have had some part in persuading him to work for the Nuffield Foundation, because there could not be a better man for the job.

It had been heart-warming to hear a brother antipodean, Sir Arthur Stephenson, speak as he did on the question of traditional usage. Professor Ward was not unused to attacking the adverse effects of traditional usage in this country, particularly in structures. On the question of the need for committees, he did not think it had been sufficiently emphasised that the architect should be brought in at the outset, possibly even before the authority had decided to build. 'A quick wooing and an early marriage', he remarked, 'will bear the best fruit.' There was danger, however, in the 'rugged, extrovert type of individual' who tended to gain power.

Professor H. W. C. Vines: I have a great admiration for the work of Llewelyn Davies, but I live in Cornwall, where these mathematical formulae do not seem to apply, and where the waiting time of patients depends largely on the local bus. In Bromley, a suburb of London, a research has been done on 5,000 out-patients, and it was found that 10 per cent of them never came at all and 20 per cent were more than 15 minutes late, but the appointments system was run on a 15-minute basis! There are some things which are beyond even the good management which Sir Arthur Stephenson emphasises, though I agree with him that adequate management of hospitals is fundamental.

When you build a hospital, the first thing to ask is what a hospital is for. It depends on the policy for the treatment of patients and how the sick *en masse* can best be handled. The planning of which we do so much, mostly on paper, is perhaps a little

academic; we never get down to seeing for ourselves whether the hospitals which we draw are able to work.

The patient is often neglected in the planning of hospitals. The chief attitude of the patient to the hospital is fear, and we have architecturally and through good management to quieten his mind. He has fears about his job and about what is going to happen to him in the enormous institution which we always seem to visualise, and he is isolated from his friends. That is why I have a feeling for the small hospital. When we talk about hospitals at meetings of this kind we do not think of anything of much under 800 beds, but the bulk of patients in this country are dealt with in small hospitals, and it is the small hospitals which are often neglected architecturally, because all the jam goes to the big ones.

**Mr. John S. Lacey [4]:** I am most interested in what Mr. Llewelyn Davies says about hospital planning from the bird's eye view of his research organisation. Tackling hospital problems from the worm's eye view, as I have recently been doing on behalf of the King Edward's Hospital Fund, greatly aided by Captain Stone—that is, alleviating the growing pains of existing hospitals by small injections in the more painful places—I have found the publications of the Nuffield Foundation extremely stimulating in their fresh approach to the problems of, for example, the ward. I regret that they have not yet been able to cover a wider field. We look forward to the bulletins of the Ministry of Health.

It seems to me that there is perhaps an unnecessarily large gap between the bird's eye view and the worm's eye view. This may be due in part to the fact that since the war the worms have been largely engaged in adapting and amending old structures, and the patching-up process does not give opportunities to make the fullest use of research.

**Mr. Peter B. H. Gundry [4]:** I should like to raise the vexed question of competitions in relation to hospital design. To the younger members of the profession competitions are an exciting opportunity, while to the older ones they are the object of a little suspicion. In the light of what has been said and the principles laid down by Mr. Llewelyn Davies, I suggest that the competition system for large- or small-scale hospital projects is outmoded and may be dangerous and unfair. It is dangerous because the award is given to the conception of a single brain. Even though it may be a brilliant conception, it is arrived at without any previous briefing by the people who will run the hospital, and it is unfair because a large part of the profession is invited to compete on that basis.

**Mr. J. E. Stone:** Sir Arthur Stephenson put the planning of hospitals on a very much higher plane than most people have been thinking of it in the past. We have to do a little more of that higher thinking and less thinking about details. Normally today when an architect and a hospital

administrator get together they think of the little details and of small changes which they might make, but that is just begging the question. In 1950 there was an article in the *Hospital and Health Management Annual Review* which said that in the very nature of things a hospital was a changing building, conforming to the demands made upon it by the constant progress made in all the arts, sciences and industries. While it was impossible to anticipate radical changes in the methods of diagnosis, treatment and care of the sick, there was little excuse for failure to utilise all the knowledge available when a hospital was designed. The greatest change lay in making the hospital a community health centre in the fullest sense of the term. The sciences of psychology, atomic energy and chemistry would bring about marked advances in diagnosis and treatment. Much more attention to the prevention of illness would increase the old-age population, and this would create problems of quite another kind. Not enough thought was being given to the problems which would arise in the near future in connection with the aged. The hospital of tomorrow could not be built today, not only because certain technological advances were in an embryo state but more particularly because many hospital authorities and architects were unwilling to concede the inevitability of change.

We have not given enough attention to the patient in the planning of hospitals; we think more of a fine elevation and good board and committee rooms. That is why I say that we should not have a committee, because those are the first things that they think about. We must think more of the patients. In the International Hospital Federation we regard this as a serious problem, and the main theme of the Congress of the Federation in Lucerne next year is to be the mental well-being of patients in hospitals. We are devoting a special section to architects and the planning of hospitals, and we hope to consider the effect on the patient of the appearance of the hospital, the size of the ward, the colour scheme and the character and nature of equipment, the effect on the patient of the arrangements made for his physical comfort, the amount of privacy, the exclusion of noise, sanitary arrangements and so on. We feel that instead of the planning of a hospital being looked on solely as a matter for a board or a committee, and purely from a management point of view, we should say 'What can we do for the patient?'

**Mr. R. Llewelyn Davies,** replying to the discussion, said: I am horrified to learn that Sir Arthur Stephenson has visited a hospital with which I have been connected without one of us being there to explain away everything that was wrong. I can assure him that we are no more satisfied than he is with the standard of the mechanical equipment which goes into hospitals in this country today. It is a subject which we have not yet had time to look at in great detail, but we hope that some of the items

which went out with the ark in other parts of the world will go out in future here too.

I think that we agree also with his views on the centralisation of services. We have designed and are now starting to construct a centralised supply service for the 600-bed hospital in Belfast, and the observations made on that will, we hope, be of help to others who are trying to develop this in the United Kingdom. I believe that he is perfectly right about management.

I agree with Mr. Aldis about detailing, and I should be happy to discuss further the question of the applicability of a basic simple plan to a range of wards. We feel that it can cover most wards, other than maternity and children's wards.

I agree with Dr. Maitland about the difference between demand and need, but it is useful to know something about demand, and the more we know about it the more wisely we can speculate on need.

Professor Vines tells us that the laws of mathematics are abrogated in the Duchy of Cornwall. I regret this. I do not think that the local bus or the fact that some patients are late can greatly affect the issue. Even if the bus gets you into Truro three hours before your appointment you will probably prefer to spend the time in some other way than sitting in the out-patients' department.

Mr. Lacy referred to the publication of research findings. We are very conscious of the fact that we have done work which has not been published yet. Our original terms of reference envisaged a short-term project of three or four years, to end in a comprehensive report. This report will be published in the spring of next year and cover the whole of our work to date. In future, however, we do not intend to allow research findings to build up in that way, and we shall publish interim reports. We have published some 15 papers on various aspects of our work.

**The Chairman,** in calling on Mr. Molander, Director of the Swedish Central Hospital Planning Bureau, to give the second paper of the afternoon, said that in listening to it one should bear in mind the fact that the area of Sweden was about three times that of England and Wales, and yet the population was only about seven millions.

## THE GENERAL DESIGN PROBLEMS OF THE HOSPITAL

by **M. E. Molander,** Director, Central Hospital Planning Bureau of Sweden

**Mr. M. E. Molander,** in presenting his paper, said it dealt almost entirely with technical and economic problems. These represented the necessary basic knowledge. Hospital design, however, meant more than this combination of facts and observations; it meant a synthesis of elements, some of which were difficult to define in a rational way. For example, it was often said that a hospital must be friendly—that was a sort of slogan nowadays—but did that friendliness extend to the placing of the hospital in the townscape or landscape?

The medium size or large hospital in or near a town represented a difficult architectural problem owing to its volume, the hospital as a rule being both larger and out of scale with other buildings. He had the impression that town planning authorities were often paralysed by the hospital as some strange technical creation outside the bounds of normal architectural comprehension, a view often sponsored by certain architects.

Illustrating his argument with slides, Mr. Molander first showed a landscape (Fig. 7) in which a building of almost any size could be put without much hesitation, provided it were not too near the town. But if the hospital were moved into the town (Fig. 8), the contradiction between the scales would become acute. The hospital on the hillside and the one in the town represented, as architecture, two quite different problems, though the technical demands were the same.

Different kinds of topography and landscape also suggested different solutions. An idyllic park and a rough wooded stretch of country demanded different things. A two-storey or three-storey building was lost in a landscape covered with pine forests (Fig. 9). A multi-storey building would rise over the treetops, giving a free view over and from the surrounding country (Fig. 10).

This kind of solution might be questioned on purely technical or economic grounds but he felt sure that it paid to make the hospital attractive in the eyes of the public as well as of the staff. Owing to their volume, hospitals should be planned with special regard to the townscape, and it could be done. To illustrate this, Mr. Molander showed some views of models in a recent architectural competition for a hospital in Stockholm. All these represented good hospital solutions in principle, but all the designs were different and paid special attention to the townscape.

## Discussion

Mr. Birch-Lindgren (Sweden), expressing gratitude for the invitation to be present, said discussions about the planning of hospitals, not only in each country but also on a broader basis, were very necessary. We had much to learn from each other, because the development, in a way, was uniform.

He agreed with Sir Arthur Stephenson about economy, because without it they could not get anywhere. But there were two sides to economy, as Sir Arthur had said, namely operating costs and building costs, and the connection between them was astonishing. They had found in Sweden that if a hospital was built for, say, £5,000,000, the yearly operation would cost about £1,000,000, or even more, so that the most important thing to strive for to secure economy was the keeping down of the operation costs.

Mr. Lindgren continued: What does that mean? If you build a hospital and have more room than you need, the operating costs will be greater than is necessary. That is obvious, and it means that you must not

build a hospital which is bigger than is necessary. On the other hand, it is necessary that each department in the hospital must be planned in such a way as not to stop the work in the entire hospital, because the hospital is a unity, and there must be a certain proportion between all the different departments. If the laboratory or the X-ray department cannot work with the same speed as the operating department the patients may have to be kept waiting, and each day in the hospital is a very expensive matter. Special thought must be given, therefore, to the proportions of each department, but we must never forget that the hospital is a unity which must be regarded as a whole.

A good deal has been said about research. I agree entirely on the necessity for research, but a hospital today is a very complicated organism and there are very many demands which have to be met, particularly with modern techniques. For instance, take the ward unit. For the patients I think the best plan is to have small wards. In Sweden we never have more than six beds in one ward, and very often we now plan for only four. It is clear that from the point of view of the patient it is good to have a small room. The smaller the rooms, however, the longer the ward unit will be, and with the longer unit there will be longer corridors and the nurses will have to spend more time walking from one end to the other, so that the supervision of the patients and the service will suffer. It is the same everywhere in a hospital; the hospital is always a compromise between different points of view.

Another difficulty is that there never have been and probably never will be found two doctors or two nurses holding exactly the same opinion with regard to hospital planning and equipment, and this does not make the architect's task easier.

There are, however, a few things which can make it a little simpler. They are not peculiar to hospital planning, but can be applied to every work of architecture, and I mention them here only because I have found that one cannot pay too much attention to them. They are (i) a complete programme, (ii) experience based on personal studies, (iii) simplicity in design, and (iv) attention to expansion of the hospital.

It is clear that architectural planning must be based on exact knowledge of the needs, expressed in square feet and other measures. It is for the hospital authorities to make this information available, but it is always very difficult to obtain such a programme. Too often the demands are vague and confused. That is explicable, as non-technical people have difficulty in expressing their demands in technical language. The architect, however, has to insist on this. I think that it is his right to obtain a clear programme.

I have often found that when we have the programme and have made the drawings a doctor has added one or two rooms. It takes two or three seconds to add them and two or three weeks to make the new drawings. Co-operation between the hospital authorities and the architect when working

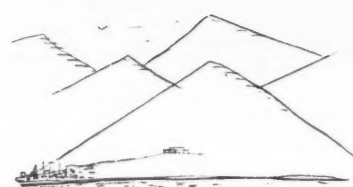


Fig. 7. Hospital outside a town



Fig. 8. Hospital in a town

out the programme is always the best solution, but the main point is not to start on the drawings before the programme is as complete as possible.

In this connection I want to emphasise that it is not only a list of all the rooms and their sizes that is needed, but a document containing as much detailed information as possible, and the more the better, especially concerning the organisation of the hospital and the hospital activities.

With regard to my second point, experience based on personal studies, I mean by this that the hospital architect must have some experience of his own of the work which is going on in the hospital. It is very easy to acquire. It is not enough that he has happened to be a patient, or that doctors and nurses and other people tell him about their work. Often I have found that the simplest, quickest and best method is to put on a white coat and follow the doctors and nurses on their rounds, looking at the operations and seeing with my own eyes how they work in the laboratories. That gives you a much better idea and helps the planning enormously. I have practised it, and it has at once made things clear to me.

My third point is simplicity in design. It may seem odd to mention it in this connection, as hospital planning is rather complicated; nevertheless I think that it is a main point, because if you get lost in all the thousands of details it is very hard to find a way out. The most important thing is to make a difference between the main points and the details, to know what is essential and what is secondary from the point of view of planning. In starting to plan, the first thing to do is to group the departments in such a way that traffic problems will be solved in the right way, because that is essential.

Provided the programme is complete, you know from this the surface area of every unit. You can, as we used to do, cut out this surface area of each unit in thick cardboard and combine them in different ways to study the traffic problems, and at the same time you have a small model of the hospital and can study the architectural effect. That helps the planning enormously.

In doing this it is important to keep in mind the fact that long experience has taught that the simplest solutions are obtained if the ward units can be brought





Fig. 9. Low hospital among trees



Fig. 10. High hospital among trees

together in a bed building or wing and the treatment units in a treatment building or treatment wing. These may be placed side by side or, as in the skyscraper hospital, one on top of the other. There are, of course, some units which can be placed as well in one wing as in the other, but that is not important in this connection.

When this is achieved—but only then, in my experience—it is time to go into the detailed planning. To this I would add that the hospital or hospital unit, as for instance an operating department, is never built for a certain doctor or nurse or administrator. It must be planned in such a way that any doctor or nurse or administrator can work there. This means that personal wishes in the way of space, number of rooms and so on ought not to be regarded. The plan must correspond to the average demand.

With regard to future expansion, my last main point, I want to emphasise that in every hospital an extension must be foreseen. Medical science and social conditions are always developing, and therefore the hospital must be regarded as a living organism which must have freedom to grow in the best possible and unforeseen ways.

I wish to make another observation which may sound a little curious in this connection. We must not forget that we are building for sick people, as has been mentioned in this Conference several times already. If we are in doubt about which solution to adopt in a certain case, in my experience it is often useful to ask ourselves this question: what will be best for the patient?

**Mr. Locksley Hare [F]:** Probably all architects will agree that there is no such thing as a perfect plan. Every plan must be a compromise, and this is particularly true of hospital work. We have to draw the line somewhere between the comfort of the patients and economy of building. A four-bed ward unit may be very nice for the patients, but it is extremely expensive and also difficult to staff, and in this country one of the most important points to be considered is obtaining nursing staff.

Mr. Aldis raised the interesting question of the height of operating theatres, particularly as applied to the experiments which are going on in Birmingham, in which I

am particularly interested. I was a member of the research party sent by the Regional Hospital Board to look at lighting, particularly in operating theatres, in various parts of France and Belgium. That research team was, I think, a valuable experiment. There were as members two architects, two surgeons, two lighting engineers and a consulting engineer.

On the question of the planning of new hospitals, I am fortunate enough to be a member of a design team, with Mr. Goldfinch, of the Regional Hospital Board in Birmingham, and we are planning a 1,000-bed mental hospital. Mr. Goldfinch produced very detailed schedules of all the accommodation which he thought was desirable for this project, which included columns in addition to those for the size of rooms, number of rooms and so on. Those schedules were sent to every member of the design team, which consisted of medical superintendents, male nurses, nurses, engineers and so on, and they put their comments against each item. We held several meetings, and, although the time taken has been fairly considerable, we now have a document which I think we can regard as our bible, and we are ready to start on the sketch plans. Although there has been a good deal of delay it has been worth while, because it will save a great deal of time on the drawing-board later.

Mr. Molander referred to recovery units attached to the theatre department of the hospital. I was in Spain with Mr. Goldfinch a few months ago and we were struck by the provision which we found in some Spanish hospitals for this post-operative recovery unit. I think that it is very valuable, and most people on the staff of a hospital will agree that it would help considerably in the treatment of patients following operations.

**Mr. Stanley W. Milburn [F]** said that all hospital planners had admired over the years the work of the Swedish architects. In 1938 it had been his privilege to meet Mr. Cederstrom in Stockholm and see the care and thoroughness with which he had prepared his design of the Southern Hospital. That great tradition was being carried on by Mr. Molander, Mr. Lindgren and their fellow architects in Sweden.

He agreed with almost everything that Mr. Llewelyn Davies had said about the St. Lo Hospital, which would be one of the finest examples of general centralisation to be built in the last few years, but in his opinion it failed in respect of the centralisation of the ward unit services, which were not up to quite the same standard as the rest. He would like Mr. Molander's opinion on the type of ward unit known in America as the 'race track' unit, the only fault of which, in his view, was that there was no direct daylight to the service rooms in which the hospital staff worked; they were entirely dependent on artificial lighting and ventilation. In London, however, most of the staff of the big stores had to work under those conditions, and many large blocks of offices were designed to depend entirely on artificial lighting and ventilation.

The operating theatre 'greenhouse window' was a thing of the past, and Nelson's theatres at St. Lo depended entirely on artificial ventilation and lighting.

Mr. Molander might be able to say why this type of unit had not been exploited in Sweden. In Kentucky a small hospital was being constructed on this plan, which was a very fine plan indeed.

Over long years of hospital work in the early days Mr. Milburn had been given to understand that if one wished to retain a reputation as a hospital architect one ought to give the matron the best suite of rooms in the whole institution. That was not the chief consideration nowadays, when most of them lived under the shelter of the umbrella provided by the Regional Hospital Board, and in recent years he had become bolder. In Northern Ireland, where Mr. Llewelyn Davies was building one of his experimental units, Mr. Milburn had had the temerity to put forward the 'race track' plan for a small unit in a large hospital, but so far without success.

**Mr. R. Llewelyn Davies [A]:** I am disappointed that no one so far has taken up Mr. Molander's controversial introductory remarks. Architects should warmly welcome the fact that he has raised the aesthetic aspect of hospital design, which is far too little thought of and discussed. I have recently spent a few weeks in America. I am interested in hospitals, but as an architect I am also interested in architecture. I visited hospitals, and I also went to see some leading architects and teachers of architecture on the eastern seaboard. I found that none of those who laid themselves out to be interested in the aesthetics of architecture or in teaching it had ever heard of any of the new hospital buildings in the U.S.A., and when I asked where fine architecture could be seen in a hospital they said 'Fine architecture and hospitals do not go together'.

This is a serious matter. I do not think that that statement is wholly untrue, although it may be exaggerated. There is a real issue here which every architect connected with hospitals should seriously consider. Is it true that the more we know about planning and the more we understand the programmes the less aesthetically satisfying our work is going to be? There is no need for that to be so, but there is evidence of this tendency.

It is striking that in the U.S.A. the architect whose work has had the greatest aesthetic impact and the most aesthetic importance, Mies van der Rohe, who produces large buildings, has in order to make this contribution practical had to throw functional planning out of the window. He has a thesis that one should provide undifferentiated internal space, and, by almost refusing to consider the planning requirements of the building, he has freed himself to the point where he can make a major aesthetic contribution.

This is a serious crisis for architecture, about which we should think very carefully. I believe that we can meet this problem by taking part as a profession in studies of

human organisation and human needs in building terms, so that we can develop a consciousness among ourselves and our colleagues who use the buildings of what the inner life of the building is, and be able to free ourselves to adopt aesthetically satisfactory solutions without having to empty planning out of the window.

**Dr. Maitland** said on the question of the size of hospitals, he recalled sitting in a room on the 85th floor of the Rockefeller Building and hearing a professor of hospital administration say 'A hospital is a hotel and a place of treatment into which the *entrepreneur* doctor goes'. Mr. Molander, since he had excluded doctors, nurses and medico-technical staff from his calculations, was really giving figures of relative costs of the hospital as a hotel, and he arrived at a figure of something under 500 beds.

Were beds, however, an adequate criterion of size? He did not think so. It used to be so, because there had been very little else in a hospital; but times had changed, and a hospital was now a place for consultation, diagnosis and treatment for many patients in addition to those in beds. It was unfortunate that the remuneration of hospital management was based on the number of beds, because good management was needed just as much for a small as for a large unit, and indeed the activities of management were better displayed in a small unit.

What was the optimum size? Below what size was it undesirable to go when planning a hospital as an adequate place for treatment, not as a hotel? In this country there were very many small hospitals, cottage hospitals with 12 to 15 beds, but with the introduction of the Health Service, which provided an opportunity to use public money to secure more rational and economic arrangements, there was a tendency to ask for much larger units and to consider these small hospitals as outmoded. Dr. Maitland did not defend their adequacy for many hospital services, but below what minimum should a district hospital not fall if it was to be adequate but economic? A separate children's ward was often demanded, and sometimes geriatric wards, wards for the two sexes, and the more influence specialists and consultants had and the more they got on to the committees which considered the matter the more they tended to ask for special ward units, often two-ward units of 20 to 25 beds each, which quickly led to a very large total. When one talked privately to these people, however, they were often content with something less differentiated, if shown the economic reasons for it. A specialist hospital could do first-class work and gain an international reputation without being very large, as measured by the number of beds. Most people thought 'The bigger the better', but hospitals could be provided for the New Towns and so on down to 200 beds, and yet be adequate.

**Dr. Ing. Nino Bertolaia** (Milan): I am very glad of the opportunity to take part in this

Conference. After reading the papers and listening to the discussion, I should like to say a word of hope for the future. Much has been said about the difficulty of planning a hospital and about a hospital being a compromise. That is true, but there is difficulty in every job. We must have faith that our work is more than a compromise; we must arrive at certain solutions which for our time are the best. There are some men who have arrived at very important solutions. We have here, for instance, Mr. Birch-Lindgren, who is known all over the world, because his solutions are more than a compromise; they are for his country the perfect solution. Reference was made this morning to Mr. Nelson's hospital at St. Lo, and that too is a solution which is almost perfect. A great deal of research has been carried out, and in the U.S.A. Mr. Shepherd did a great deal of research for many years, and all over the world his work is considered useful in planning a hospital.

It is necessary, because this problem is so difficult, to have cooperation on a larger scale than merely inside one nation; we must have the cooperation of all countries. Sir Arthur Stephenson has spoken of such cooperation within the British Commonwealth. I hope that all you plan and produce will be published, because we often find it difficult to discover what other countries are doing. The U.S.A. publishes a wonderful review, and so does Sweden, but other countries do not do so.

**Mr. M. E. Molander**, replying to the discussion, said: Mr. Birch-Lindgren said that research was necessary, but that a hospital was always a compromise between different views. I do not think he meant that research did not matter. If a hospital is a compromise between different views, we must have something to compromise between, and if you start compromising without knowing what you are compromising between it is not a very good solution. Research is a sort of ballast to steady the ship, and is not meant to sink it with all hands.

Mr. Hare referred to the difficulty of staffing hospitals, a difficulty which exists all over the world, and not less in Sweden than in this country. All that is done in economic planning and time studies and research has in view economising the staff of the hospital, whose salaries represent about 70 per cent of the cost of running a hospital today. This means, as Mr. Birch-Lindgren said, that by comparison with the running costs the capital cost is not so important.

Mr. Hare also referred to recovery units. We have not much experience of them up to now, but this is something which will come very rapidly. It is not a new conception; it has been tried for a long time in the U.S.A., and in Germany for the last twenty years, but it is something new for many of us to consider in the planning of a hospital. From experience it seems that the recovery unit must provide for about 50 per cent of the patients operated on each day.

Mr. Milburn spoke of centralising the ward unit services and asked why in Sweden we had not tried the 'race track' unit. Mr.

Llewelyn Davies has explained to me what this means, and my answer is that in Sweden we usually try to keep the ward units within the limit of 30 beds, and with a unit of that size the 'race track' arrangement is not economic. We also want to give the staff daylight in the rooms in which they work, and that is particularly important in the Scandinavian countries, where the winter is long and the days are dark. This type of arrangement has been tried, however, not in general hospitals but in four or five places used for chronic cases, where the number of beds is 40 or 50 and the scheme is practicable. In that case, however, the plans are for one-storey buildings, so that ventilation and daylight are possible in the sub-units.

I was glad that Mr. Llewelyn Davies supported my views on the architectural features of hospitals. Dr. Maitland suggests that it is not a good idea to express the efficiency of a hospital in terms of the number of beds, and I agree, but for general considerations of the kind which I have been putting forward the number of beds may perhaps be taken as an indication of the size. If you know the number of inhabitants in a city it gives you a clue to the size of that city. Moreover, when doctors talk about the size of a hospital they refer to the work which concerns the in-patients, which demands cooperation between the different departments in the hospital, and that can be reckoned more or less on the basis of the number of beds. In my country, and no doubt over here, the out-patient activities as a rule are related to the size of the hospital. It may be said that we have ten times as many out-patients as in-patients per year.

We should all like to have small hospitals if that were possible, and we try to keep down the size. There are different viewpoints, those of the patient, the administrator, the doctor, and also the architectural point of view which I mentioned in my introduction. Sometimes doctors in Sweden say that the only hospital which can really be considered as such is the central general hospital containing almost every specialty. There is a difference of opinion in Sweden between those who want to keep a large number of hospitals of modest size and those who want to centralise.

I should like to thank Dr. Bertolaia for what he said about the work done in my country. A great deal of information can be derived from the Bouwcentrum in Rotterdam, which has collected material on hospital planning and which issues reports. We all have to work with very small resources, and therefore coordination between different countries is necessary if we are to derive something from this work. I recommend closer cooperation and Conferences of this type, where we can come in close personal contact with each other. That is much better than reading periodicals, particularly if they are in a language which we do not understand!

*The Discussion on the second day of the Conference will be reported in the December Journal.*

# Practice Notes

Edited by Charles Woodward [A]

**IN PARLIAMENT.** London Builders' Conference (Restrictive Practices). Asked what action he proposed to take in view of the Report of the Monopolies and Restrictive Practices Commission on the Supply of Buildings in the Greater London Area, the Minister of Works replied:—Discussions have started with the parties concerned. The representatives of the London Builders' Conference have stated that the practices criticised by the Monopolies Commission are being suspended and that steps are being taken to provide for their abandonment. I hope to be able to make a fuller report to the House in due course. (19 October 1954).

Asked if, in view of the Monopolies and Restrictive Practices Commission's Report on the Supply of Buildings, he will insist on tenderers for Government building contracts signing the declaration of non-collusion, as recommended by the Royal Institute of British Architects, the Minister of Works replied:—I would refer the Hon. Member to the reply I gave to the Hon. Member for Accrington on 19 October, in which I said that discussions were taking place. Meanwhile, I do not propose to alter the declaration now in use.

Asked further whether he was aware that his reply would give great disappointment to Kent County Council and many other local authorities which feel that the Minister is dragging his feet in relation to this matter, the Minister replied:—I said that I would make a statement as soon as I am in a position to do so. (26 October 1954.)

**MINISTRY OF HOUSING AND LOCAL GOVERNMENT.** Model Byelaws. Water waste prevention. 1954 edition. These Model Byelaws have now been issued by the Ministry and are obtainable at H.M. Stationery Office, price 6d. net. They are designed to prevent waste, undue consumption, misuse, or contamination of water supplied by water undertakers.

As soon as new byelaws are made by the undertakers under Section 17 of the Water Act 1954 existing byelaws will be revoked.

**Improvement Grants.** Opening a demonstration at Bedford on 12 October showing the conversion of a large semi-detached house into three self-contained flats, the Parliamentary Secretary to the Ministry of Housing and Local Government said:

"The fact remains that we in this country build to last, and five million of our houses are over 65 years old. Some of these houses are a pride and joy to look at, for they include some of the best architecture in the country. Others, equally well built, are deteriorating for want of some capital expenditure. We are offering a lifeline to owners of older houses. We are saying to them: 'Take a grant, take a gift of money,

put some money to it yourselves, and put your older houses in order.'"

"Take this example at Bedford. Here are two 12-room houses built 60 years ago and quite unsuitable to-day for one average family. Bedford Council is making three flats out of each of them. They estimate that had a private owner converted them the cost would have been about £400 each, of which the owner could get up to £200 each in grant. I say to all owners of older houses such as these, 'This is your chance. Don't let your older houses go downhill towards decay. Take the money the Government is offering—it is the chance of a lifetime both for yourselves and for your houses.'"

**LONDON COUNTY COUNCIL.** Building Contracts. Since the war the Council's standard form of building contract for major works has incorporated a fluctuations clause in respect of rates of wages and prices of materials, but the Council has throughout accepted the principle that a reversion to fixed-price tendering is desirable as soon as circumstances permit. So far as wages are concerned, the Council accepts that a point of reasonable stability has not yet been reached, but it considers that prices of building and civil engineering materials have been as stable over the last two years as they were before the war.

As a first step therefore towards the adoption by the Council of the principle of fixed-price tendering, it has been decided to introduce experimentally for a limited period, subject to review as may be found necessary, a simple system of alternative tendering. For all jobs using orthodox materials where the contract period does not exceed two years, contractors will be invited to tender on two bases, (a) as at present with the fluctuations clause applying to both wages and materials, and (b) with a fluctuations clause applicable to wages only (i.e. with fixed prices for materials). Contractors will be free to tender on either or both bases.

The present system (i.e. invitation on basis (a) only) will continue to operate for the time being for works having a contract period in excess of two years and/or jobs involving non-traditional methods of construction where special considerations may arise. (Press Notice, 29 October 1954.)

**NATIONAL BUILDINGS RECORD.** The Report of the Record for the year ending April 1954 has now been issued. It is interesting to note that the Council of the National Buildings Record is represented on the Council for England set up under the Historic Buildings and Ancient Monuments Act 1953. This liaison enables records to be furnished to the Council for England which are of assistance to that body in considering grants.

The Record has in its library some 425,000 items of photographs and measured drawings of architecture in England and Wales, and these are available to the public for consultation and study. Where negatives are available applicants can be

supplied with copies. There are over 200,000 such negatives.

The National Buildings Record is now established in its new offices at 31 Chester Terrace, Regent's Park, London, N.W.1.

**THE ROYAL INSTITUTION OF CHARTERED SURVEYORS.** The Landlord and Tenant Act 1954. The Institution has now published an exposition of this Act written by J. A. R. Finlay, M.A., Barrister-at-Law.

The author has dealt with the Act in narrative form, which to the non-legal mind is a method to be commended when a highly complicated piece of legislation is explained. To the surveyor the chapters dealing with initial repairs and a record of the state of repair of residential property will enable him to appreciate the matters he should deal with in this connection. Compensation to a tenant for improvements would also come within the surveyor's sphere, and the chapter on this subject will be of assistance.

"Business" as defined in the Act includes the offices of professional men, and the chapter on the security of tenure may have a personal interest to the surveyor. A surveyor is not a lawyer, but is supposed to know the law relating to his profession. This exposition will enable him to appreciate where his professional opinions are required under the provisions of the Act, and a careful reading of the book would repay such study.

The Act of 1954 makes reference to seven previous Acts, and it is to be hoped that our legislators have succeeded in producing legislation which carries out their intentions. Time alone will show.

It is understood that copies of the book are available to non-members of the Institution, price 7s. each.

**DUSTBINS.** Who is to provide a dustbin, the landlord or tenant?

The L.C.C. (General Powers) Act 1954 enacts that a borough council may serve a notice on the owner of any house not sufficiently provided with dustbins of suitable size and material and in proper condition, requiring him to provide such bins as may be specified in the notice. The owner may appeal to a court of summary jurisdiction under the Public Health (London) Act 1936 (as set out in Schedule 1 of the L.C.C. (General Powers) Act 1951 and amended by Section 21 of the 1954 Act) on the ground, *inter alia*, that the notice is not justified or is unreasonable, that there has been some error or irregularity in or in connection with the notice or that the house is occupied by some other person who ought to comply with the notice.

This recent legislation would not appear to have solved the problem in London having regard to the grounds of appeal open to an aggrieved person, and also to other provisions in the new Act relating to dustbins.

**NEW STREETS AGREEMENT.** The Interim Report for 1954 of the National Federation of Building Trades Employers



made reference to the decision of the house-builders' section, the Federation of Registered House-Builders, that it would be helpful if there were available a standard form of agreement for use by builders and local authorities in connection with the construction of new streets. This decision was the result of the F.R.H.B.'s consideration of difficulties arising from the operation of the New Streets Act 1951 and had particular reference to the recommendation from the Minister of Housing to local authorities that full advantage should be taken of the exception provided in that Act where a local authority enters into an agreement with a builder for the making up of a road under Section 146 of the Public Health Act 1875.

The agreement for the construction of new streets, prepared by the Federation of Registered House-Builders, has now been published and a sample copy has been sent to all registered house-builder members. The new form has been framed fairly to protect the interests of the public, the local authority and the developer. In essence it is an undertaking by the developer to provide a complete road to any house he may build within a specified period after the occupation of that house—and an undertaking by the local authority thereupon to take over that road. The new form of agreement will, it is hoped, come to be widely used in those cases where the making of proper roads forms part of the housing development. Copies of the agreement may be obtained from the N.F.B.T.E., 82 New Cavendish Street, W.1, or from Regional Offices (price 1s. 9d. per copy).

**ARBITRATION.** Interest on the amount awarded. Under Section 20 of the Arbitration Act 1950 a sum directed to be paid by an award shall, unless the award otherwise directs, carry interest as from the date of the award and at the same rate as a judgment debt.

In *Chandris v. Isbrandtsen Moller Co. Inc.* it was decided by the Court of Appeal that an arbitrator had power to award interest on the amount of his award (1950, *All England Law Reports*, Vol. 2, page 618). This power is distinct from the provisions of Section 20 of the Act of 1950, which is a statutory claim by one of the parties in cases where there is delay by the other party in paying the sum awarded.

**Costs of the Reference and Award.** Although the costs of the reference and award are in the discretion of the arbitrator, that discretion must be exercised judicially, and his order as to costs will be reviewed by the Court if there is an appeal from the arbitrator's finding on costs. The usual order is that costs follow the event, and if the arbitrator in his discretion does not make the usual order he must be prepared to show a reason connected with the case which, in the event of appeal, the Court can see is proper.

To order costs on the basis of comparing the amount claimed with the amount awarded will result in the claimant receiving less than the sum awarded, a result which

the arbitrator never intended. As it was necessary for the claimant to resort to arbitration in order to recover the amount awarded to him, the mere fact that he claimed more than the sum awarded is no reason for depriving him of any costs. To order a claimant to receive only half his costs from the respondent because the sum awarded is only half the claim is to reduce the amount which the arbitrator intended the claimant to receive.

Where there is a claim and a counter-claim and both succeed, it would be usual to award that the respondent pay the claimant's costs of the claim, and the claimant pay the respondent's costs of the counterclaim.

It is usual to order that the costs be taxed as between party and party, and a Taxing Master of the High Court will then deal with the details of the costs.

## Book Reviews

**The Marseilles Block**, English trans. of *L'Unité d'Habitation de Marseilles*, by *Le Corbusier*. Geoffrey Sainsbury, trans. 11 in. x 8½ in. 72 pp. incl. pls. and pp. of illus. text illus. Harvill Press. 1953. £1 1s.

In the same way that *Vers une Architecture* opened the eyes of the world to a fresh aesthetic, so this exposition of *L'Unité d'Habitation* should clarify our approach to living in cities. The books are similar, too, in that they both put forward their problems as universal ones involving the entire community and not merely a small professional section of it. The Marseilles block is particularly important to us at the moment because it exemplifies one of two conflicting approaches to the building of cities. It should be of profound interest to everyone who is concerned with the making of new towns or the reconstruction of old ones, and therefore involved in the struggle of urbanism against suburbanism. It is a powerful argument in support of the point of view that the city is as important as the individual units in it.

Although in the past fifty years there have been many developments in the home itself, mostly in the form of specialist equipment, we have shown little progress in our handling of the relationship of home and city. In fact some of our best examples in this field are still 18th and early 19th century houses with improved equipment. We search for a unit of comparable commodity, flexibility and delight, a vernacular pattern valid both in Park Lane and Camberwell, as its Georgian predecessor was. It is in this universality that *L'Unité d'Habitation* is so important. The principle of the narrow-fronted interlocking maisonnette is poetically simple and widely applicable. In each case the treatment of the façade and its finish can be considered in relation to the light, the climate and the money available. Another technique which can be universally applied is the controlled use of shuttering to give texture to large areas of concrete as a painter gives texture

to his surface. This shows particularly on the dividing walls of the balconies where concrete surfaces have been colour-washed. Another is the deliberately large scale and coarse finish of the frame and balustrade, giving a feeling of comfort and shelter and compensating for the insecurity derived from living in a high place out of touch with the ground.

On the face value of its photographs and drawings this book is reasonably priced at a guinea. Its intrinsic worth is very much more, not only to the professional reader, but to anyone who thinks or cares about anything beyond his own back garden. Its place is not only next to *Oeuvres Complètes*, but in normal homes and lending libraries. The translation by Geoffrey Sainsbury seems to be made with more gusto but rather less poetry than is usual with *le Corbusier's* work. This enhances the strong sense of realism and actuality which this book derives from its subject—not a hypothetical project but a successfully completed pilot scheme.

H. T. CADBURY-BROWN

**Victorian Architect: The Life and Work of William Tinsley**, by *J. D. Forbes*. 9½ in. xiv + 153 pp. + (xvi) pp. of illus. Bloomington, U.S.: Indiana University Press. 1953. \$5.00.

William Tinsley was an Irishman who began his career in County Tipperary, eclectically at home in the various styles of the 'thirties and 'forties. After emigrating to the United States in 1851, he designed churches and houses and, more especially, buildings for several of the new little colleges that were springing up in Indiana, Illinois, and Ohio. The author characterises him as a reinforcer, not an innovator, of trends begun but not yet widely accepted in a region 'where the Georgian post-Renaissance died hard and the Greek Revival continued to flourish'. His buildings in Collegiate Gothic were among the earliest American examples of a trend that is not yet dead, while his Italianate work contributed to the current fashion. As for his ecclesiastical work, it is hard to share the author's enthusiasm for the rather meagre evidence of Tinsley's churches. For British readers, perhaps more comparison with able American contemporaries would have been useful, and visitors to the R.I.B.A. Library will be glad to have the work of R. Upjohn (by E. M. Upjohn, 1939) and of Town and Davis (by Newton, 1942) at their elbow. For American readers, perhaps more could have been made of the architectural scene in the British Isles of the 1830's.

Mr. Forbes writes with plain but pleasant clarity, in spite of an awkwardness here and there, and shows how precision can avoid aridity. Another hopeful omen for university presses is the bibliographical note at the end, here a welcome improvement on separate notes. About twenty of Tinsley's buildings in Ireland and the United States are illustrated, as well as some portrait drawings, of marginal interest, made at the O'Brien trial of 1848. The legends under

the architectural illustrations might well have included dates for easier reference.

This sort of book furnishes richness of detail for future surveys.

PRISCILLA METCALF

**A Dictionary of English Domestic Architecture**, by A. L. Osborne. 9½ in. 112 pp. incl. pp. of illus. text illus. Country Life. 1954. £1 1s.

In addition to general dictionaries of architecture, like Ware and Beatty, it is useful to have glossaries of special branches of the subject; hitherto the mediaeval period has been almost the only topic thus honoured, but we could do with others. This is an exceptionally good book in many ways. There are six hundred or more clear definitions, varying in length according to the subject; the word 'domestic' is interpreted very widely, though, like most earlier publications, the book deals chiefly with the larger dwellings. The line drawings, amounting to the equivalent of about 40 pages, are both crystal-clear and charming; they are interspersed conveniently with the text, and have explanatory captions with significant terms in capitals; although they presumably show parts of actual buildings, these are not identified. A chronological table is at the end; no index is necessary.

Obscure topics appear to be courageously faced, though without question-begging: in the chart, the late seventeenth- beginning of eighteenth-century period is called 'Near-baroque', and under 'Mannerism' further research (says the author) is needed to show whether or not an English Mannerist style really exists'.  
H. V. M. R.

**Prestressed Concrete Design and Construction**, by F. Walley. (Ministry of Works.) 9½ in. xv + 279 pp. + 24 pp. of illus. text diag. H.M.S.O. 1953. £1 10s.

This book is a very interesting effort to set out the technical problems involved in the various types of prestressed concrete. A number of other publications have appeared in recent years dealing with these individually, but most of these books are biased in favour of one of the many methods of prestressing. Mr. Walley, in the privileged position of being independent of vested interests, can give a candid opinion.

The book is of particular interest for the engineer, and it provides detailed calculations for a number of examples. It also provides a special chapter dealing with practical methods of precast concrete.

For most architects it would probably make heavy reading and is possibly too detailed in its approach. There is one chapter referring to the methods of prestressing and their applications but this unfortunately extends over little more than one page, and while it gives some concise rulings as to preference for pre-tensioned and post-tensioned units it does not go into sufficient detail to give architects an indication as to what shapes of beams, slabs, etc., they should use and what kind of prestressing would be useful in particular circumstances.  
F. J. SAMUELY

**Climate and Architecture**, by Jeffrey Ellis Aronin. (Progressive Architecture Book.) 11½ in. x + 304 pp. incl. pp. of illus. text illus. New York: Reinhold; Lond.: Chapman & Hall. 1953. £5.

When asked to review Mr. Aronin's *Climate and Architecture*, I accepted readily. A rapid glance through its glossy pages revealed a wealth of illustrations: solar diagrams and brises-soleil; temperature curves; maps of rainfall, snow cover and frost penetration; houses in Canada, and in the Sudan; layouts of towns from Brazil to Chandigarh. I turned to the bibliography to find what it included; saw my name and read that the R.I.B.A. Science Lecture referred to was 'very interesting'; was flattered and went home ready to praise. This was the book for which architects were waiting.

Mr. Aronin's English proved difficult to read, slang and scientific jargon running neck and neck, but the British reader is fairly warned in the introduction: 'American preferences in grammar and spelling have been employed'. Most of the diagrams, I soon recognised, were from previous publications. They were an oddly assorted collection: a Burnet sunshine diagram for Nuneaton; Pleijel's 'Soldiagrams' for the Swedish arctic circle; an Antonin Raymond sun-angle graph for Tokio; but little of direct use to the North American architect, the author apparently being unaware of the charts by I. F. Hand, published in the *Smithsonian Meteorological Tables*. It was the same with American climate maps. They excluded Canada, though much of the other climatic data was for Canada alone. Little, on close examination, was meant for reference. It was only illustrative.

The text appeared to be on similar lines. On page after page one met long extracts from other publications, strung together with comments by Mr. Aronin, usually uncritical and sometimes astonishingly naïve, such as 'by the way, Mr. Pleijel has a perfect command of English', or (in the Bibliography) 'should be good reading. The author has not read it'. To illustrate the form in which the book is written, the section on Lightning is worth mentioning. It begins with the story of how Benjamin Franklin invented the lightning conductor; quotes at length from the U.S. Dept. of Commerce's Code for Protection against Lightning; and ends with a lengthy extract on the protection of trees from the National Fire Protection Association's Code. That is all. There is no original comment; nothing about the relative severity of lightning discharges in different parts of the world; nothing about the effect of shelter or exposure; nothing to show that Mr. Aronin has any personal experience of lightning protection or has read more on the subject than the two Codes and a life of Franklin.

As one turns the pages, *Climate and Architecture* gradually assumes a familiar form. Beneath its £5 trappings lies a student's thesis—and not a very good one. It is regrettable that such well-known American architectural publishers as Reinhold, and so eminent a British firm as Chapman and Hall, should have sponsored

—presumably as a serious contribution to architectural scholarship—a work of such immaturity. *Climate and Architecture* cannot be recommended to the student or practising architect in Great Britain, or overseas in the Commonwealth. Even for the school reference library, the confusion and lack of balance in its make-up outweigh the value of the assorted scraps of information which its text includes. Until a worthwhile study is available, architects interested in climate are best advised to turn to a standard textbook like Kendrew's *Climatology* (Oxford University Press), making use, for basic climatic data, of the *Climatological Atlas of the British Isles* (H.M.S.O.), or, more generally, Kendrew's *Climates of the Continents* (Oxford University Press).  
G. ANTHONY ATKINSON [A]

**Das Grosse Buch vom Eigenen Haus, &c.**, by Siegfried Stratemann. 11½ in. 311 pp. text illus. Munich: Callwey. 1954. DM28.

This big book is written as much for the client as for architectural students or architects.

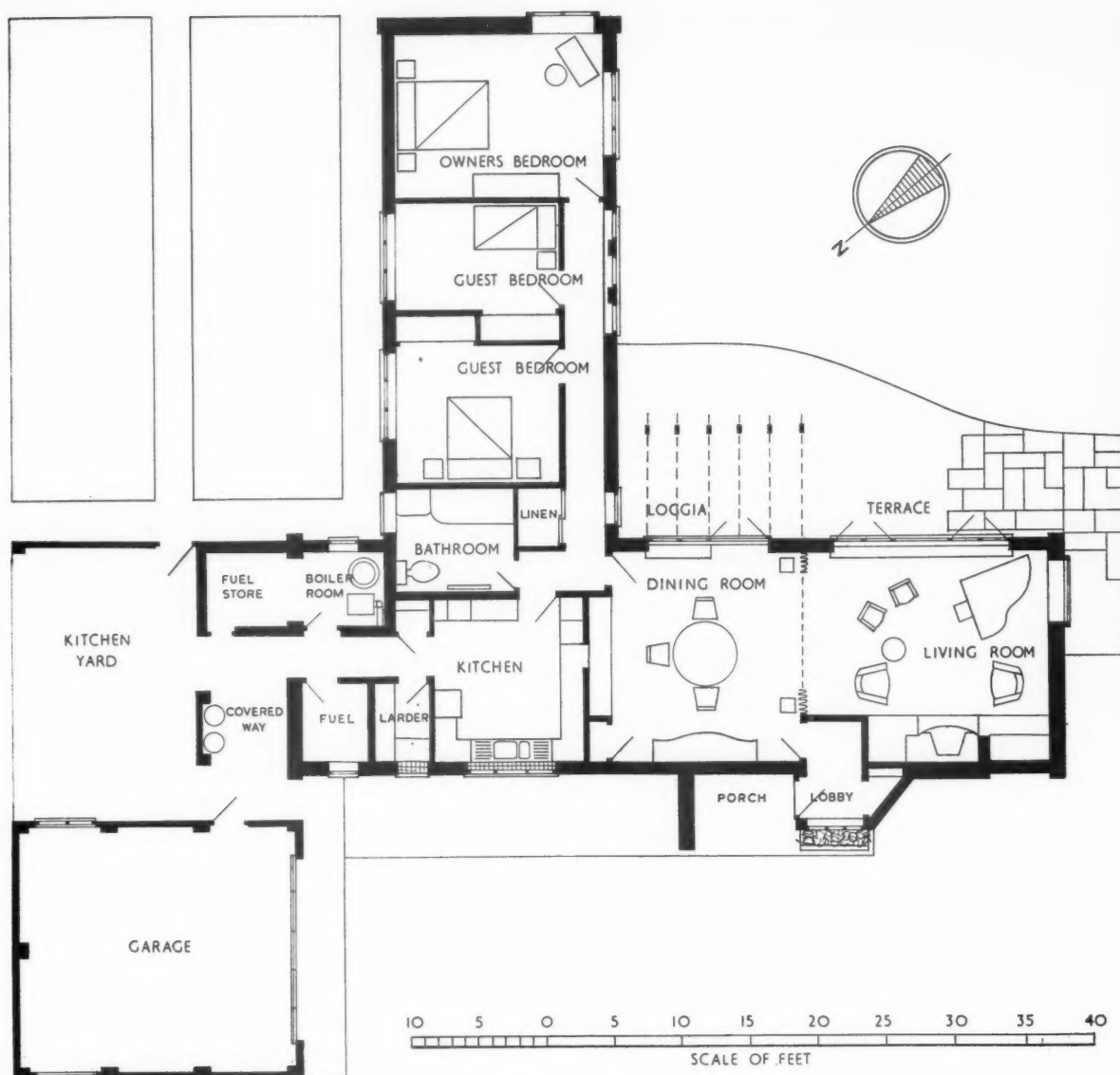
In Germany the vast majority of small houses are built for individual clients to their own requirements and by their own architects. Blocks of flats, of course, are designed for collective clients, much as they are in this country, but the very fact that it is worth a publisher's while to produce such an expensive and comprehensive volume of houses, chiefly for prospective clients, is proof of an enjoyable state of affairs for the architect in private practice.

Of necessity, the author covers much ground which has been adequately treated in many design handbooks, and the drawings, to scale and very delightful, are hardly new.

What is rather novel and interesting is an emphasis on the adaptability of the plan to future changes in the family. Nor is the study of adaptability confined to increases or decreases in the size of a plan. By adjusting a number of non-load bearing partitions in an otherwise standardised plan, examples of different ways of living in a house of typical construction and cost are demonstrated with the help of plans and interior perspectives. The latter are particularly valuable aids. It is really amazing how identical elements can be used with such variety of expression. The exteriors are extraordinarily Germanic. Few of them would pass unnoticed in an English city.

The most rewarding portion of the book is the treatise on each individual element of the plan with a detailed description of the requirements, possibilities, and beauties of every part of the house, from the coal cellar to the bay window, from the living-room to the attic bedroom. This is perhaps a subject that has not been sufficiently illustrated in older books and students will find it most stimulating. The meticulous and thoughtful drawings are well presented; there is little fault and much enjoyment to be found in them.

GERHARD ROSENBERG [A]



## 'Newlands', Fornham All Saints

Architects: Sandon and Harding [AA]

THE West Suffolk County Council have decided to offer an annual award for what is considered to be the most outstanding contribution to building in West Suffolk during any year. This is the first attempt made in this county to give recognition to buildings erected by private enterprise. Two classes of building are eligible for the award, (1) residential buildings, and (2) other buildings, including industrial and commercial buildings. The award is given to the architect and the builder of the design placed first by an assessor appointed by the R.I.B.A.

The award for 1953 has been given to the

architects and builder of 'Newlands', Fornham All Saints, as recommended by the assessor, Mr. S. Rowland Pierce [F].

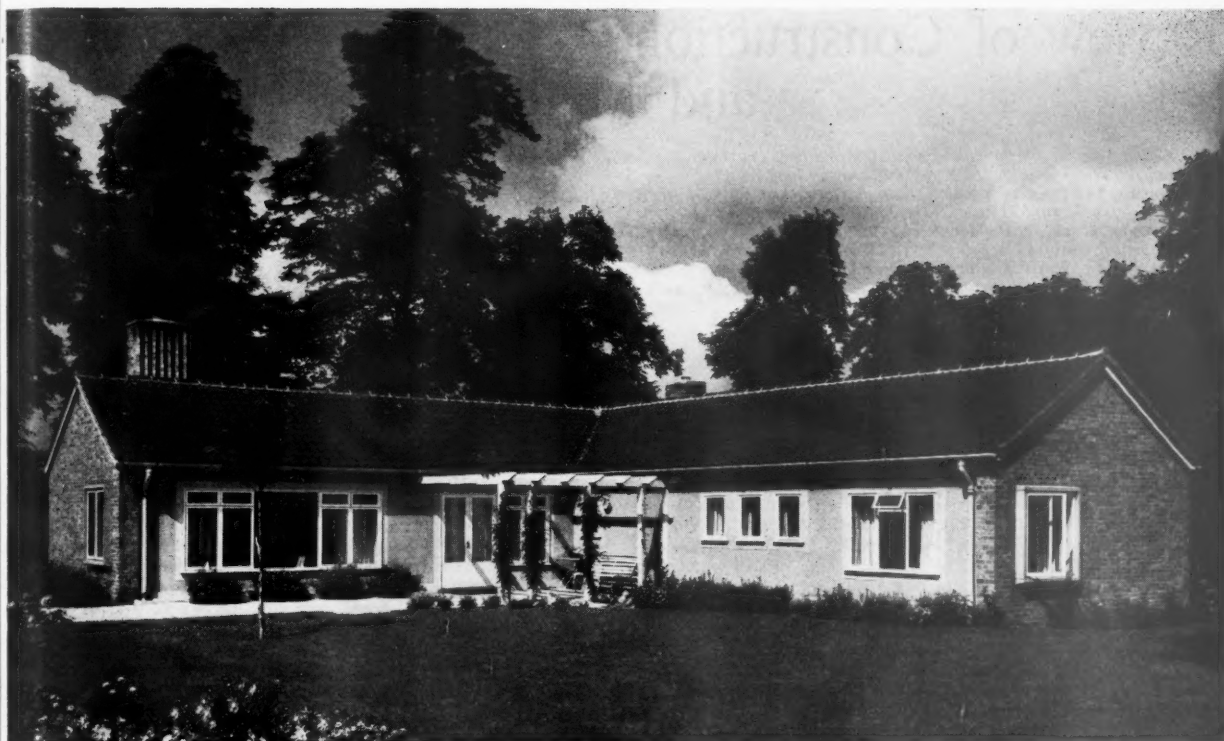
In his report Mr. Pierce said that the scheme stood out from many of the others submitted by reason of good placing on a flat site, but one which was relieved by some fine trees and interesting background surroundings. He also remarked on the excellence of the design of the house, inside and out, both from architectural and planning points of view. The quality of workmanship and finish by the building craftsmen, especially of the joinery and external rendering, received Mr. Pierce's commendation.

The clients' instructions to their architects were that they wished the house to be as fully labour-saving as possible, and, particularly that the living-room should give a greater feeling of spaciousness than is usual in a small house and be big enough to take several large and good pieces of antique furniture they possessed.

The facing bricks are Essex primrose multicolour, with a  $\frac{3}{4}$  in. lime-cement oatmeal-coloured sprayed rendering on the keyed brickwork, the window openings being finished with a wood float. The roof is in Anglia antique brown pantiles. The 2 ft. 3 in. wide casements were specially made and were based on E.J.M.A. improved standard windows. They have been painted off-white.

The floors are solid concrete finished with  $\frac{1}{8}$  in. thermoplastic tiles, the living-





View of the house from the south, showing the the loggia



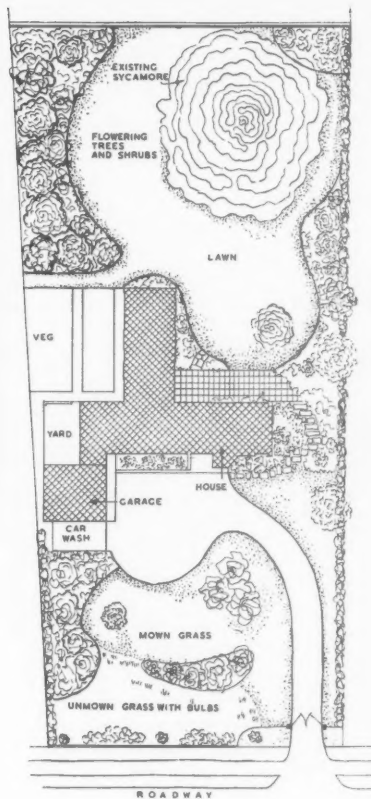
Above: the entrance front, from the drive  
Right: the general lay-out

room, dining-room, bedrooms and passages being close carpeted. The front door is in oak, specially designed, but the doors generally are grade A plywood-faced flush doors. The kitchen fitments are E.J.M.A. standard.

Polished Clipsham stone and polished slate have been used for the mantelpiece in the living-room; reconstructed Clipsham stone has been used for the window boards over the radiators.

The heating is by a combined central heating and hot water installation with indirect cylinder; the heating appliance being a composite oil-burner unit with a 600-gallon oil storage tank, the room temperatures being controlled by a motorised valve.

The garden lay-out was designed by Mr. Kenneth Midgley, of Ipswich, and the general contractor was Mr. F. A. Valiant, of Barrow, near Bury St. Edmunds.



# Review of Construction and Materials

*This section gives technical and general information. The following bodies deal with specialised branches of research and will willingly answer inquiries.*

*The Director, The Building Research Station, Garston, near Watford, Herts.  
Telephone: Garston 2246.*

*The Officer-in-charge, The Building Research Station Scottish Laboratory, Thorntonhall, near Glasgow.  
Telephone: Busby 1171.*

*The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks.  
Telephone: Princes Risborough 101.*

*The Director, The British Standards Institution, 2 Park Street, London, W.1.  
Telephone: Mayfair 9000.*

*The Director, The Building Centre, 26 Store Street, Tottenham Court Road, London, W.C.1.  
Telephone: Museum 5400 (10 lines).*

*The Director, The Scottish Building Centre, 425-7 Sauchiehall Street, Glasgow, C.2.  
Telephone: Douglas 0372.*

**Fire-Retardant Treatment of Fabrics.** In their reissue of *Fire Precautions in Small Halls used for Entertainment Purposes*, reviewed in the JOURNAL of January 1953, the Fire Protection Association have added as an appendix an account of an instance where fire treatment of a cotton velour stage curtain undoubtedly prevented destruction of a hall by fire.

The case, which was reported by the County Fire Officer of the West Riding of Yorkshire, concerns a rehearsal for a play in St. Luke's Parochial Hall, Harrogate. The rehearsal, at which smoking had been permitted, ended at 10 p.m. and the hall was locked. Unknown to those present, a discarded lighted cigarette end had fallen and was in contact with the bottom edge of the proscenium curtains. At 6 p.m. next day the vicar entered the hall and, on smelling burning, summoned the fire brigade. It was found that the cigarette had ignited the bottom hem of the curtain and that fire had travelled along it and up two vertical seams; the floor also was slightly charred. This small fire had gone out without igniting other material.

The curtains and scenery had been treated with a fire-retardant solution in September 1951, but it appears that the solution had not entirely penetrated the double thickness of material in the hem and seams, so that the untreated material had been able to burn progressively, though slowly. The impregnation of the single thickness of cloth elsewhere, however, was sufficient to prevent the curtain burning. Had the curtain and scenery not been so treated, a large fire must have occurred.

The formula used for treatment was borax 10 oz., boric acid 8 oz., water one gallon. Details of this treatment are given in Appendix I of the booklet which is obtainable without charge from the Fire Protection Association, 15 Queen Street, E.C.4.

**The Ferranti Fridge-Heater.** In the April 1954 JOURNAL a description was given of the Brentford Duo-Therm domestic heat pump, which heats the domestic water and at the same time cools the compartment in which it is installed. Messrs. Ferranti Ltd. have now produced an appliance which

serves the same purposes. The unit is 3 ft. high, 16 in. wide and 16 in. from front to back. It will deliver about 5 gallons of hot water an hour in the summer at a temperature of 140° F and 2½ gallons an hour in the winter.

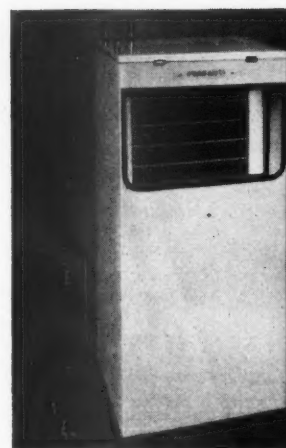
A hot water storage tank is required and this should be well lagged but not completely, as a slight heat loss is needed so that the machine may run and keep the larder cool. The recommended capacity of the storage tank is 10 gallons if not more than one bath at a time is wanted; 20 gallons if not more than two baths at a time, and 30 gallons if not more than three baths. The electrical components are a motor and a fan, the pump being thermostatically controlled. The air in the larder is blown over the tubes of the evaporator, thus causing the comparatively cool air to evaporate and still further cool the air. It also causes the moisture in the air to condense, which both dries and cleans the air. This moisture collects in a drip tray.

There is a temperature gradient in the larder, and in the case of one of 96 cu. ft. the air temperature at a level lower than the lid of the unit will be 15 to 20 degrees below the outside temperature, but at the top of the compartment it will be about the same as the outside temperature, therefore dairy produce, meat and fish should be kept low down in the larder. For the best results the larder should not be larger than 120 cu. ft.

The consumption of electricity is roughly a unit per person per day.

For fuller details application should be made to Messrs. Ferranti Ltd., Heat Pump Department, Moston, Manchester 10, or to the London office, Kern House, 36 Kingsway, London, W.C.2. It is not expected that the appliance will be in full production for about a year.

**Thermoglas.** The useful and well-known properties of fibreglass and bitumen have been combined in a product marketed by Messrs. D. Anderson & Son Limited, of Manchester and London, under the name of Thermoglas. This material is a flexible sheet of fibreglass coated with specially-selected asphaltic bitumens to suit the requirements of the individual Thermoglas product.



The Ferranti Fridge-Heater unit

Thermoglas roofing felt is sand-finished and is manufactured in rolls 12 yd. long and 36 in. wide, weighing 45 lb. a roll and designed for built-up roofing specifications.

Thermoglas damp-proof course is made from asphaltic bitumens and is finished with a fine crushed mineral surfacing to provide a good key for mortar. Rolls measure 8 yd. long by all usual wall widths. The weight is 7 lb. per sq. yd. It is claimed that a d.p.c. based on fibreglass is completely inert and will not deteriorate through absorption of moisture, and that these considerations apply also to the roofing felt.

**Venetian Blinds.** The Venetian blind, once mentally linked with the aspidistra and other impedimenta of the years before the first world war, is much in evidence again. A number of new restaurants about London are fitted with it, demonstrating its properties of keeping out inquisitive stares while admitting light and air. It has of course obvious other advantages in industry, offices, schools, etc. Glare must sometimes be kept out, even in the English climate. Conversely the eyes and attention of the young, always ready to wander, must sometimes be persuaded to concentrate on the matter in hand. What is perhaps surprising is the large proportion of its domestic use—apparently 70 per cent of Venetian blinds sales are still to Mrs. Jones and Mrs. Smith to protect the privacy and furnishings of the drawing room.

The modern ones are both attractive and utilitarian. They are made of aluminium alloy, 0.01 in. thick, stove enamelled in a wide variety of pastel shades, and even in different shades on the two sides: thus permitting, say, a sunny creamy-yellow effect on a dull day which can be changed to a cool green in a heat wave. The slats are slightly curved, which causes them, when tilted at an angle of approximately 45 deg., to reflect back a startlingly increased intensity of artificial light from within the room. The curve also makes for the conservation of internal warmth in winter. The makers claim too that it makes for easier cleaning, but this seems a moot point; and indeed the cleaning

problem still seems to be the disadvantage of this kind of curtaining for windows. Admittedly their smooth finish is helpful, so is the fact that all blinds made by one particular firm are easily detachable from their fittings, lifting down bodily when something more than a vacuum cleaner or duster is required: while one model, the 'Two-Way', can not only be raised or lowered in the usual way from the top, but from the bottom also. This brings it down to a comfortable level for cleaning, besides having other obvious advantages.

All blinds from this firm have an automatic locking device which fixes them at any level and can be worked at a touch of the finger from a distance—thus, for instance, it is not necessary to enter a shop window to adjust the window blind. The same firm makes a variation of the Venetian blind for slanting or horizontal roof lights. Where double glazed windows are used Venetian blinds can be fitted between the two panes.

Manufacturers of the particular brand of blind described here, the 'Sunway' Venetian Blind, are Messrs. Horsley, Smith & Co. (Hayes) Ltd., Hayes, Middx.

**Lattice Shell Roofing.** 'An economical structural system for roofing large spaces giving adaptability in design' has been introduced by the manufacturers, Messrs. Scaffolding (Great Britain) Ltd., Mitcham, Surrey. The system has been designed by Messrs. Ove Arup and Partners and it combines the two structural principles of shell structures and triangulation.

In essence, lattice shell roofing consists of a triangulated steel tubular network located in a curved surface, which may be cylindrical, corrugated or of domical form. As the lattice is self-supporting it is simple to provide daylighting units where required, and various forms of cladding can be applied, either on the top only, leaving the triangles exposed internally, or on both sides. A method which gives good heat insulation (U-value = 0.19) is to wire expanded metal to the framework and lay lightweight concrete with a waterproofing top finish.

The longitudinal span is governed by the rise, radius and the strength of the materials used, but the recommendations say that if the span is less than 30 ft. the system is not economical; above 80 ft. a central line of columns should be considered, and that up to 120 ft. a lattice downstand beam may be needed to keep the radius within the maximum, to obtain a sufficient rise and to avoid a steep slope at valleys.

The width is governed by the following considerations: the length of arc should be a multiple of the pre-assembled unit widths, which are about 6 ft. 6 in.; the length of radius must not be more than 40 ft., the most economical length being about 30 ft.; the slope at the valleys should not be too steep and should not be more than 45 degrees if light-weight concrete cladding is used, otherwise the ratio of roof area to unit floor area will be uneconomical. Daylighting factors should also be considered.



A lumenated ceiling installed in a London motor car showroom

The support across the ends of the shells is given by rigid end gables, resting on walls or columns. Any number of shells may be placed next to one another, forming valleys between, but support must be provided to the extreme edges of the shells. The lattice shell may be cantilevered over the supports, in the direction of the span, for a distance equal to half the length of the span. The economical rise is one-eighth to one-twelfth of the span.

**Lumenated Ceilings.** A new form of ceiling lighting was recently shown to the Press. It consists of corrugated translucent vinyl sheets supported in a steel framework composed of lengths of 22-gauge H-section track suspended by hangers; rigid spacer tubes keeping the tracks parallel at about 3 ft. centres. The vinyl sheeting is supplied in rolls 3 ft. wide and 25 ft. long, and for placing in position it is simply pulled along the channels of the track and held in position by plastic clips. Sleeves and telescopic draught shields form part of the assembly.

The lights are suspended above the translucent ceiling, fluorescent lamps being generally the most satisfactory form, and the result is an evenly-illuminated ceiling with practically no shadow areas, and the intensity is not high enough to cause discomfort when the ceiling is looked at directly. The intensity can range from 20 to 200 lumens per sq. ft.

Every part of the room above the suspended lumenated ceiling should be painted white, as the reflecting qualities of the cavity surfaces are of importance in aiding the general illumination. The sheeting is treated with an anti-static process, to reduce the collection of dust, but when necessary the plastic can be washed and

re-processed by a mobile 'laundry' run by the company.

All metal parts are bonderised and stove-enamelled, and the whole ceiling weighs about 12 oz. per sq. ft. The sheeting does not support combustion.

If the lighting system needs attention it is an easy matter to withdraw, and indeed to roll up, the plastic sections to give access to the lighting fittings. At present the price works out at about 8s. per sq. ft., exclusive of the cost of erection. The system is marketed by Messrs. Lumenated Ceilings, Ltd., of 4 Lloyd's Avenue, London, E.C.3, and Helen Street, Glasgow.

**Government Publications on Building.** The Ministry of Works have compiled a list of books, pamphlets and leaflets published by Government departments and dealing with building and allied subjects. The list includes publications of the Ministries of Works, of Housing and Local Government, of Labour and allied subjects. The list includes publications of the Ministries of Education, and also of the Building Research Station, the Road Research Laboratory and the Forest Products Research Laboratory.

The list is called H.M.S.O. Sectional List No. 61 and may be had from H.M.S.O. free of charge.

**Wallpaper Showrooms.** The Wallpaper Manufacturers Ltd. have opened a showroom and advisory department at 125 High Holborn, London, where architects can inspect wallpaper designs and discuss their requirements with the attendant staff in quietude, undistracted by the atmosphere of harassed uncertainty that so often prevails in the big showrooms frequented by the general public.

As wallpapers seem to be definitely 'in', it is well to be able to select them in peace.



# Notes and Notices

## NOTICES

**Second General Meeting, Tuesday 7 December 1954 at 6 p.m.** The Second General Meeting of the Session 1954-55 will be held on Tuesday 7 December 1954 at 6 p.m. for the following purposes:—

To read the minutes of the Inaugural General Meeting held on 2 November 1954; formally to admit new members attending for the first time since their election.

Mr. Basil Taylor to read a paper on 'Art History and Contemporary Art'.

(Light refreshments will be provided before the meeting.)

**Session 1954-1955. Minutes I.** At the Inaugural General Meeting of the Session 1954-1955, held on Tuesday 2 November 1954 at 6 p.m.

Mr. C. H. Aslin, C.B.E., President, in the Chair.

The meeting was attended by about 300 members and guests.

The Minutes of the Eighth General Meeting of the Session 1953-1954 held on 15 June 1954, having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The President delivered his Inaugural Address of the Session.

On the motion of Mr. Nigel Birch, O.B.E., M.P., Minister of Works, seconded by Brigadier E. H. L. Beddington, C.M.G., D.S.O., M.C., Chairman of the Hertfordshire County Council, a vote of thanks was passed to the President by acclamation, and was briefly responded to.

The President welcomed the many visitors and in particular Mr. Glenn Stanton [H.C.M.], Immediate Past President of the American Institute of Architects, and Sir Arthur Stephenson, C.M.G. [F], Royal Gold Medallist 1954. Mr. Stanton and Sir Arthur Stephenson thanked the President for his welcome and briefly addressed the meeting.

The President, having alluded to the services of the Immediate Past President, then unveiled and formally presented to the Institute the portrait of Sir Howard Robertson, M.C., A.R.A., S.A.D.G. [F], painted by Professor Rodrigo Moynihan, C.B.E., A.R.A.

Sir Howard Robertson expressed his thanks to the Meeting. Professor Moynihan also spoke.

The President presented the R.I.B.A. London Architecture Bronze Medal and Diploma for 1953 to Messrs. Devereux and Davies [FF] for the new Out-Patients' Building, St. James' Hospital, Balham, S.W. 17.

Messrs. Devereux and Davies thanked the President and Council for the honour conferred upon them.

The President also presented the replica of the Bronze Medal to Mr. A. C. Stuart-Clark, Chairman, Wandsworth Hospital Group Committee, representing the building owners, and he and Mr. S. Marshall Andrew, representing the Contractors for the building, also spoke.

The proceedings closed at 7.37 p.m.

**British Architects Conference 1955.** The British Architects Conference in 1955 will be held at Harrogate at the invitation of the West Yorkshire Society of Architects. The dates now fixed are from 8 to 11 June 1955 and the Conference Executive Committee are engaged in drawing up the programme, particulars of which will be published in due course.

**Kalendar 1954-55: Corrections.** In the new issue of the Kalendar the name of the following member has been omitted in error:—

A. Jones: George Wilkes, B.A.(Arch.) (Manchester); 7 Lingfield Road, Runcorn, Cheshire. [12541] 1951

On p. 358 the entry Norton: John Barrow should read Morton: John Barron.

On p. 493 the address of Mr. Morris Tribich [A] is incorrect and should be as follows: 17 Balfour Road, Highbury, London, N.5 (CANonbury 2576).

The name of the following Student has also been omitted in error: Gladstone: John Michael Christopher, 81 Canfield Gardens, N.W.6 (MAIda Vale 6581).

The name of Mr. J. N. R. Gladstone should have been deleted from the list of Students as he was elected an Associate on 5 January 1954.

**R.I.B.A. London Architecture Bronze Medal 1954.** The attention of members is called to the form of nomination and conditions of the award, enclosed with this issue of the JOURNAL. The award will be made for a building built within the counties of London and Middlesex during the three years ending 31 December 1954. Any member of the Royal Institute may nominate any building for consideration by the Jury.

Nomination forms must be returned to the Secretary, R.I.B.A., not later than 28 February 1955.

**Cessation of Membership.** Under the provisions of Bye-law 21, the following have ceased to be members of the Royal Institute: *As Fellows:* William George Lloyd Cheriton, Henry Edgar Gardham, Frederick Stanley Haynes, James Barrington Wride. *As Associates:* George James Douglas Cowley, Alwyn Ronald Dent, Mordaunt Henry Caspers Doll, Sidney Constantin Halbritter, Denis Lacey, Alan Keith Sigley Lorimer, Ralph Waldo Maitland, Norman Alfred Peachey, Arthur Henry Ernest Shearing, Albert Edwin Smith, Frederick Ernest Samuel Storer. *As Retired Associate:* George Victor Lidbury. *As Licentiates:* Norman James Allen, Frank James Frederick Brooksbank, John Stanley Crome, William Shaw Cruickshank, Joseph Johanathan Giddens, Ronald Arthur Kettlewell, George William Manning, Malcolm Nicolson. *As Retired Licentiate:* Ernest John Wallis.

**Formal Admission of New Members at General Meetings.** New members will be asked to notify the Secretary R.I.B.A. beforehand of the date of the General Meeting at which they desire to be introduced and a printed postcard will be sent to each newly elected member for this purpose. On arrival at the R.I.B.A. on the evening of the General Meeting new members must notify the office of their presence and will then take their places in the seats specially numbered and reserved for their use. On being asked to present themselves for formal admission, the new members will file out in turn into the left-hand aisle and after shaking hands with the President (or Chairman) will return to their seats by way of the centre aisle.

Formal admission will take place at all future Ordinary General Meetings of the present Session, with the exception of the following:—Inaugural General Meeting, 1 February 1955: Presentation of Prizes, 5 April 1955: Presentation of Royal Gold Medal.

**Associates and the Fellowship.** Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election

they should send the necessary nomination forms to the Secretary, R.I.B.A., as soon as possible.

**Licentiates and the Fellowship.** By a resolution of the Council passed on 4 April 1938 all candidates whose work is approved are required to sit for the Examination, which is the design portion of the Special Final Examination, and no candidates will be exempted from the examination.

*Note.*—The above resolution does not affect Licentiates of over 60 years of age applying under Section IV, Clause 4(c)(ii) of the Supplemental Charter of 1925.

**Architectural Competitions—Assessors' Awards.** All architects who take part in architectural competitions are reminded by the Council of the R.I.B.A. that participation in a competition is a definite acceptance of the principle that the award of the assessor is final and binding upon themselves as well as upon the promoters, and that any competitor who feels that he has real ground for dissatisfaction with an assessor's award should communicate with the Secretary of the R.I.B.A.

Further, all architects, whether competitors or otherwise, are reminded that discussion or correspondence in the public or professional press which tends to criticism or disparagement of an assessor or award cannot alter the final and binding effect of the award, but may prejudice architects and the whole competition system in the opinion of the public, and is therefore highly undesirable.

**The Acceptance of Pupils and Junior Assistants and the Probationership of the R.I.B.A.** The Board of Architectural Education have noticed that the practice still persists of members accepting pupils or junior assistants without satisfying themselves that such pupils or junior assistants have reached the necessary standard of general education for the Probationership. Members are reminded that it is most important that they should not take boys or girls into their offices unless they possess one of the qualifications laid down.

A list of the recognised examinations can be obtained on application to the Secretary, R.I.B.A.

## COMPETITIONS

**Church and Church House at Liverpool.** The Liverpool Diocesan Reorganisation Committee invites architects to submit designs in competition for a new Church House and Chapel on the site of St. Luke's Church, Berry Street, Liverpool.

Assessor: Sir Giles Gilbert Scott, O.M., R.A. (Past-President).

Premiums: £800, £400, £200.

Last day for submitting designs: 16 December 1954.

Conditions may be obtained on application to P. Straw, Secretary, Liverpool Diocesan Reorganisation Committee, Church House, 47 Moorfields, Liverpool, 2.  
Deposit, £2 2s. 0d.

## COMPETITION RESULT

**All-India Medical Institute, New Delhi**

1. Messrs. H. J. Brown and L. C. Moulin [A] in association with Mr. A. H. Antrum [A].

2. Messrs. Kavinde and Rai of Delhi.

3. Messrs. Parelkar [A], Gore [A] and Parpia of Bombay.

*Hon. Mentions:*

Mr. R. R. Sarma [A] of Madras.

Messrs. Prynne, Abbott and Davis of Madras.  
Messrs. Gregson, Batley and King [FF] of Bombay.

## BOARD OF ARCHITECTURAL EDUCATION

**R.I.B.A. Examination for the Office of Building Surveyor under Local Authorities.** At the R.I.B.A. Examination for the Office of Building Surveyor under Local Authorities held on 6, 7 and 8 October 1954 fourteen candidates presented themselves and the following were successful: Sidney J. Adkins, John D. Aldous, Walter H. Couperthwaite, William L. Ikin, Henry C. Johnson, Peter Miller, George Warrington, Thomas Whittaker.

## ALLIED SOCIETIES

### Changes of Officers and Addresses

**Nottingham, Derby and Lincoln Society of Architects, North Lincolnshire Branch.** The former joint Hon. Secretary, Mr. J. A. Hendry [A] has resigned, and Mr. H. T. Bower is now Hon. Secretary.

**The Alberta Association of Architects.** President, Mr. K. C. Stanley, 618 Northern Hardware Building, Edmonton, Alberta. Hon. Secretary, Mr. H. L. Bouey, 305 Northern Hardware Building, Edmonton.

**Province of Quebec Association of Architects.** President, Mr. Lucien Mainguy, F.R.A.I.C., 1045 Chaumont Avenue, Sillery, P.Q. Hon. Secretary, Mr. Gerard Venne, 604 St. Jean Street, Quebec. (Mr. Bernard M. Deschenes remains the Executive Secretary.)

**The South Australian Institute of Architects.** Hon. Secretary, Mr. J. S. Hall [A], Royal Insurance Building, Grenfell Street, Adelaide, S.A.

**Institute of Southern Rhodesian Architects.** President, Mr. A. C. Dold [A], P.O. Box 153, Bulawayo, Southern Rhodesia.

**Transvaal Provincial Institute of Architects.** The address of the Secretaries has been changed to 302 Kelvin House, 75 Marshall Street, Johannesburg, South Africa.

**Hampshire and Isle of Wight Architectural Association: Annual Dinner.** The Hampshire and Isle of Wight Architectural Association held their annual dinner at Winchester on Friday 8 October. The President of the Association, Mr. J. B. Brandt, M.T.P.I. [F], was in the Chair, and among the guests were Mr. C. H. Aslin, C.B.E., President R.I.B.A., and Mrs. Aslin; Mr. W. R. Ellis, Deputy Secretary R.I.B.A., and Mrs. Ellis; the Dean of Winchester, Dr. E. G. Selwyn; the Mayoress of Winchester; Alderman Dutton, Deputy Mayor; the Mayors and Mayoresses of Romsey and of Southampton; the Presidents of the Wessex Federal Society of Architects, of the Wilts and Dorset Society of Architects and of the Berks, Bucks and Oxon Architectural Association; and representatives of the local Federations of Building Trades Employers.

The Dean of Winchester, proposing the toast of the R.I.B.A., expressed his gratitude to Mr. W. J. Carpenter Turner [A], architect to the Dean and Chapter, and to other architects past and present. Mr. Aslin, responding, spoke of the importance of cooperation between all the many interests concerned in building. He welcomed the presence at the dinner of Mr. A. L. Roberts [F], past President of the Association and former county architect of Hampshire, who had been Vice-President of the R.I.B.A. 1944-46, Hon. Secretary 1946-50 and Hon. Treasurer 1950-52.

Mr. Brandt proposed the toast of the guests and said Mr. Aslin was one of the outstanding county architects in this country today and the Association were greatly honoured by his presence. Alderman Dutton responded on behalf of the Mayor of Winchester, who was unable to be present owing to illness. He said he hoped architects would prevent this period from becoming known as the utility period of building. Mr. W. S. Jones, President of the Southern Counties Federation of Building Trades Employers, said it was the policy of the Federation that the public should be encouraged to go to architects and not direct to the builders.

## GENERAL NOTES

**Leverhulme Research Awards.** Application is invited for fellowships and grants in aid of research. These awards are intended for senior workers of established position and are limited to British-born subjects normally resident in the United Kingdom; in exceptional circumstances the Trustees may waive the condition as to residence.

No subject of inquiry is excluded from consideration but preference is given to subjects in which existing provision for research is inadequate. The duration of the awards does not normally extend over more than two years or less than three months and the amount depends on the nature of the research and the circumstances of the applicant.

Forms of application may be obtained from the Secretary, Miss M. Branney, Leverhulme Research Awards, St. Bridget's House, Bridewell Place, London, E.C.4, Telephone: City 1910. Applications must be received on or before 31 December 1954. Results will be announced in May and the awards will normally date from 1 September 1955.

**R.I.B.A. Golfing Society. Autumn Meeting held at Wentworth Golf Club on Wednesday 22 September.** The autumn meeting was held in fine weather on the two courses. The Selby Cup, which was played for on the west course, was won by G. Felix Wilson with a score of 83 - 5 = 78. The runners-up were F. Sutcliffe with a score of 95 - 14 = 81, and M. Andrews-Jones with a score of 98 - 17 = 81. The afternoon four-ball Stableford competition was played on the east course and was won by

R. G. Scott and Hamilton Gould with a score of 36 points, after a tie with Joseph Emberton and Eric H. Firmin; the winners having the best second nine holes.

The Annual General Meeting was held in the evening, when F. T. Smith was elected Captain for the next season. Eric H. Firmin retired from the post of Honorary Secretary after seven years, and S. H. Statham was elected to follow him in this post. A. D. McGill was elected to the Committee. A vote of thanks was passed to the retiring Officers.

**Symposium on Roofing Materials at Bristol.** The Royal West of England School of Architecture at Bristol held a Symposium on 'Roofing Materials' on 21 October, which was attended by architects and surveyors from all parts of the west country and also a number of builders, builders' surveyors, foremen, clerks of works, craftsmen and students, about 120 in all. It was organised by Mr. Denzil Nield [A], Construction Lecturer at the school.

The purpose of the meeting was to exchange users' experiences of materials and methods, particularly information obtained from maintenance. Many members of the industry have had experiences, both good and bad, some relating to quite small matters but no less valuable, which would be of interest, as warning or encouragement, to colleagues in the industry. The discussion which took place and subsequent comments show that there seems to be a need for such meetings.

The first session, under the Chairmanship of Mr. J. Nelson Meredith [F], President of the Bristol and Somerset Society of Architects, City Architect of Bristol, was devoted to 'Traditional Materials'. The discussion was opened by Mr. R. Potter [F], President of the Wessex Federal Society of Architects, who was supported by Mr. Peter Falconer [F] of Stroud and Mr. Freeman, a builder and expert on stone tiling. The second session, on 'Materials more recently Developed', for which Mr. G. W. Grosvenor, National President of the N.F.B.T.E., took the Chair, was opened by Mr. John Collins [A] who was followed by Mr. P. N. Taylor [A]. They spoke on their experience on industrial buildings. On each session there was much discussion.

A small exhibition of samples of roofing materials was on show in the hall during the Symposium. It is the school's intention to hold other meetings of this kind next year.

## Notes from the Minutes of the Council

### MEETING HELD 12 OCTOBER 1954

1. Sir Arthur Stephenson, C.M.G. [F]. Sir Arthur Stephenson, C.M.G. [F], Royal Gold Medallist 1954, attended the Council meeting and gave a short address to members.

2. Appointments. (a) R.I.B.A. Architecture Bronze Medals: R.I.B.A. Representatives on Juries convened by Allied Societies. The Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects—David Booth [F], President, Berks, Bucks and Oxon Architectural Association. The Indian Institute of Architects—Bombay Chapter, M. K. Jadhav [F]; Delhi Chapter, S. K. Joglekar [F]; Madras Chapter, M. G. Desai [F]; Calcutta Chapter, (to follow).

(b) Town Planning Institute: Rees Jeffreys Triennial Lecture: R.I.B.A. Representative on Advisory Committee—R. T. Kennedy [A].

(c) University of Leeds: Hoffman Wood Bequest: R.I.B.A. Representative on Advisory Com-

mittee for Chair of Architecture—Hubert Bennett [F], President, West Yorkshire Society of Architects—nominated for appointment by the University.

(d) R.I.B.A. Representatives on B.S.I. Committees. PVC/Pigments, Paints and Varnishes Industry Standards Committee—The Hon. Godfrey Samuel [F] in place of S. Kadleigh [A]. BMB/2 Asphalt and Pitch Mastic for Building Purposes—A. J. Fagg [A] in place of G. Fairweather [F]. Conference to consider B.S. for fire-cast concrete eaves gutters—F. Heaven [A]. On following list of B.S.I. Committees—ACM/Acoustics Standards Committee, ACM/2 Architectural Acoustics and Sound Insulation, B/10 Standard Definitions and Tests for Fire, Resistance and Incombustibility, B/19 Unit Weights of Building Materials, B/29 Co-ordination of sequence of Trade Headings in Specifications, B/61 Architectural and Building Drawing Office Practice, MEE/32 Engineering Symbols and Abbreviations,

MEE/85 Drawing Office Equipment and Equipment, MEE/104 Identification of Pipe Lines, Cables, Conduits, etc., OC/20/2 Alphabetical Arrangements, OC/20/4 Universal Decimal Classification, OC/20/4/9 Topographical Sub-Divisions, OC/20/4/13 Building Architecture and the Arts (U.D.C. 69/7), PAC/9 Wallpapers, PEB/- Builders' Plant and Equipment I.S.C., PEB/1 Metal Scaffolding—Steel, PVC/2 Paints, S/14 Trade and Technical Literature, SFE/14/3 Thermal Insulating Materials for Building, SFE/14/5 Definitions and Methods of Test for Heat Insulation, USM/1 Co-ordination of Definitions, Units and Technical Data, WPC/2 Classification of Wood Preservatives, WPC/2/1 Classification of Wood Preservatives (drafting)—R. T. Walters [A] in place of C. J. Epril [F].

(e) *Code of Practice Committee for Farm Buildings.* The resignation of Mr. C. J. Epril [F] was reported. It was agreed to leave it to Mr. R. M. Betham [A], the second representative, to represent the R.I.B.A.

(f) *Ministry of Works Building and Civil Engineering Regional Joint Committees.* It was reported that the Minister of Works had under consideration the future of the Regional Joint Committees and in the meantime had decided to extend the period of appointment of existing representatives until further notice. These appointments were due to lapse on 30 September 1954.

3. **Mr. Arthur Bailey, O.B.E. [F].** The congratulations of the Council were conveyed to Mr. Arthur Bailey, O.B.E. [F], on the award by H.M. the Queen of the Netherlands of the Order of Orange Nassau.

4. **Direct Election to the Fellowship.** On the recommendation of the Council of the Royal Australian Institute of Architects, Mr. Eric Keith Mackay, F.R.A.I.A. [A], Past President of the Royal Victorian Institute of Architects, was elected to the Fellowship under the provisions of the Supplemental Charter of 1925, Section IV, Clause 4.

5. **Exhibitions.** (a) *The Artists International Association.* The Council approved a proposal from the Artists International Association that an exhibition designed to appeal to those in a position to give patronage in the arts in such fields as Local Government, education, industry and hospitals should be shown at the R.I.B.A. in the late spring of 1955. The exhibition will include designs for murals, panels, sculpture, stained glass, paintings and graphic work and material will be selected by a committee on which the R.I.B.A. will be represented.

(b) *Contemporary Australian Architecture.* The Council accepted with appreciation the offer of the Royal Australian Institute of Architects to prepare an exhibition of contemporary Australian work for showing at the R.I.B.A. early in 1956.

6. **The Nuffield Foundation: Fellowships for Architects.** The Council were informed that the Trustees of the Nuffield Foundation had decided to establish two Fellowships for architects tenable for a period of two years with the object of extending facilities for post-graduate work and research at universities. The selection committee convened by the Nuffield Foundation would include Sir William Holford [F] and it was suggested that Dr. Leslie Martin [F] should represent the architectural profession. The Council welcomed this decision and it was agreed that Dr. Leslie Martin [F] should act as representative of the profession.

7. **Building Research Programme 1954-1955.** The Ministry of Works having asked for the Royal Institute's comments on the draft Building Research Programme for 1954-1955, it had been left to the Science Committee to study the matter and prepare comments. Approval was given to the Science Committee's comment approving the draft as a comprehensive programme but suggesting the need for more investigation into the problems of building for low temperature storage in regard to both soils and materials; and also the need to expedite research work by all possible means in view of the rapid expansion of the national building programme.

8. **Rules of Allied Societies.** Formal approval was given to amendments to the rules of the following Allied Societies: The Federation of Malaya Society of Architects, The Hampshire and Isle of Wight Architectural Association, The Indian Institute of Architects, The Stirling Society of Architects, The Suffolk Association of Architects.

9. **Membership.** The following members were elected: as Fellows 13, as Associates 120, as Licentiates 4.

10. **Students.** 129 Probationers were elected as Students.

11. **Applications for Election.** Applications for election were approved as follows: *Election 1 February 1955 (Overseas Candidates)*, as Associates 18.

12. **Applications for Reinstatement.** The following applications were approved: as Associates—Gerald Wanklyn Flower, Alfred Eustace Habershon [Retd. A], Mrs. Ruth Mary Lowy.

13. **Resignations.** The following resignations were accepted with regret: Miss Jean Mary Anderson [A], Mrs. Josephine Rees Colquhoun [A], Philip Thomas Guilment [A], Percy Estcourt Holland [A], James Smith, junior [A], William Richard Templar [A], Joseph Phillips Baker [L], Harold Sidney Sroxton [L].

14. **Applications for Transfer to Retired Members' Class under Bye-law 15.** The following applications were approved: as Retired Fellows, Brevet-Colonel Harold Wood Barker, Horace Raymond Chanter, Alfred Young Mayell, James Osbert Thompson, William Erskine Thomson; as Retired Licentiate—Fred Scatchard.

15. **Obituary.** The Secretary reported with regret the death of the following members: George Hicks, C.B.E. [Hon. A], Edouard Arnaud, Officier de la Légion d'Honneur [H.C.M.], Guy Church [F], Benjamin Price Davies [F], Leslie Maurice Evans [F], Frederick McIntosh Glennie [F], Ernest Edmund Morgan, O.B.E., M.C. [F], Major-General Sir Charles Rosenthal, K.C.B., C.M.G., D.S.O., V.D. [F], Roy Kenneth Stevenson [F], Lieut.-Colonel Brian Lister Sutcliffe, T.D. [F], Thomas Smith Tait [F], Fred Vaux [F], Frederick Willey [F], Edward G. Wylie, C.B.E., M.C. [F], John Walter Little [Retd. F], Frank Hearn Shayler [Retd. F], Percy Douglas Prior [Retired Member of the Society of Architects], Ian Colquhoun [A], William Bunter Colthurst [A], William Harold Lane Crauford [A], Ronald Leslie Hounsell [A], Stanley Boothby Howard [A], Reginald Neville Jackson [A], Jack Lawrence Lambert [A], Mrs. Heather McDonald Moir [A], Francis Spencer Munt [A], Arthur Willmott Addison [Retd. A], Walter Thomas Armstrong [Retd. A], George Sydney Herbert Bradford [Retd. A], William

Thomas Cox [L], Robert Moir Gibson [L], Arthur Ernest Hughes [L], George Clifford Oldham [L], John Pollard [L], Arthur Henry Salisbury [L], Horace Alfred Stokes [L], Khanderao Pandurang Thakur [L], Robert Allen Fordham [Retd. L], Septimus Charles Hanson [Retd. L], Charles Burton Maltby [Retd. L], Hedley Cecil Quérée [Retd. L], Donald Walker Mackereth [Student].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

## Membership Lists

### ELECTION: 12 OCTOBER 1954

The following candidates for membership were elected on 12 October 1954.

#### AS FELLOWS (13)

Barnard: Albert Edward [A 1929].  
Cantwell: Wilfrid John, B.Arch. (N.U.I. Dublin) [A 1945], Dublin.  
Collins: Tom Anderson [A 1927], Leicester.  
Cookson: Ronald Ewen, A.M.T.P.I. [A 1933], Ormskirk.  
Cuzens: Gerald John [A 1946], Bognor Regis.  
Gasson: Alfred Stanley, A.R.I.C.S. [A 1934], Leamington Spa.  
Gauldie: William Sinclair [A 1943], Dundee.  
Irvine-Smith: Charles Chudleigh, B.Arch., Dip. T.P. (Rand) [A 1940], Johannesburg, S. Africa.  
Singleton: William Adam, Ph.D. (Manchester), M.A., B.Arch. (L'pool), Dip.T.P. (Manchester), F.S.A., A.M.T.P.I. [A 1940], Manchester.  
Smith: Jack [A 1939], Heckmondwike.  
Vaz: Julius Lazarus [A 1937], Orissa, India.  
Wade: John Howard, A.A.Dipl. [A 1938], Victoria, B.C., Canada.  
Wilson: James William Gilchrist [A 1928].

#### AS ASSOCIATES (110)

Amor: John Rex, Loughton.  
Archer: Bryan Russell, Watford.  
Arklie: (Miss) Patricia Ann.  
Aronin: Jeffrey Ellis, B.Arch. (Manitoba), M. Arch. (McGill), Woodmeor, L.I., New York, U.S.A.  
Ashworth: Fred, Dipl.Arch. (Northern Polytechnic), Llandudno.  
Bagwell-Purefoy: Christopher Edward, Walton-on-Thames.  
Ball: Dennis.  
Ball: John Elliott, Dipl.Arch. (Northern Polytechnic), Sutton.  
Bank: Naty, B.Arch. (Rand), East London, S. Africa.  
Blakey: Gordon Wilson, Dipl.Arch. (Leeds), Leeds.  
Bloom: Denis George, Dipl.Arch. (Northern Polytechnic).  
Bowler: Graham Arthur, Dip.Arch. (Nottm.), Derby.  
Bray: Robert.  
Brook: Frank, Birmingham.  
Brooker: Ludlow Ellison, Wellington, New Zealand.  
Brooks: Denis Anthony, Dipl.Arch. (Leeds), Wakefield.  
Bryant: James Howard, B.Arch. (Rand), Johannesburg, S. Africa.  
Burdon: Heinrich Balduin, Nairobi, Kenya.  
Cameron: Donald Samuel, D.A.(Edin.), Oban.  
Caplan: (Mrs.) Theolea, B.Arch. (Rand), Johannesburg, S. Africa.  
Chalmers: James Ower Dalgety, Dip.Arch. (Abdn.), Aberdeen.  
Chetwynd-Stapilton: Henry Philip, B.Arch. (L'pool), Farnham.



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**Christopher: Graham, Dip.Arch. (Manchester),** Manchester.  
**Coatman: John Sidney Berrill.**  
**Cook: William Leonard, Dipl.Arch. (Northern Polytechnic).**  
**Cooper: Gerald, Dipl.Arch. (Leeds), York.**  
**Crooke: Patrick William, A.A. Dipl.**  
**Curtis: Ronald George David, Lusaka, N. Rhodesia.**  
**Davidson: Ronald James, D.A. (Edin.), Edinburgh.**  
**Davies: Ivor Frank, Dip.Arch. (Birm.), Coventry.**  
**Ding: Gar Day, B.Arch. (Auck. N.Z.), Dunedin, New Zealand.**  
**Dunn: Kenneth William, Cheltenham.**  
**Duthie: Alexander Mitchell, Dip.Arch. (Abdn.), Newtonhill.**  
**Emmett: (Miss) Phyllis Margaret, A.A. Dipl.**  
**Fairhead: Allan Donald, Dip.Arch. (Auck. N.Z.), Auckland, New Zealand.**  
**Finsen: Eyvind Niels, B.Arch. (Rand), Johannesburg, S. Africa.**  
**Freer: Geoffrey Collin, Dipl.Arch. (Oxford), Reading.**  
**Gale: Reginald Leslie William, Dipl.Arch. (Oxford), Barnstaple.**  
**Garnett: Gordon William, Dip.Arch. (Nottm.), Nottingham.**  
**Gordon: Stanley Mackay, Dip.Arch. (Abdn.), Aberdeen.**  
**Grace: Henry Walter, Hong Kong.**  
**Green: John Roger Banks, Sevenoaks.**  
**Greenhough: Anthony Gardner, B.Arch. (Auck. N.Z.), Auckland, New Zealand.**  
**Hadland: Brian John, Dipl.Arch. (Northern Polytechnic), Upminster.**  
**Hague: John Henry, Dipl.Arch. (Oxford), Reading.**  
**Hampson: Ian Geoffrey, B.Arch. (L'pool).**  
**Hart: Stephen Nelson, B.Arch. (L'pool), Stamford.**  
**Heath: Derrick Edward, Dipl.Arch. (Northern Polytechnic).**  
**Herbert: John David, B.Arch. (Auck. N.Z.), Auckland, New Zealand.**  
**Herd: Douglas Hislop, D.A. (Edin.), Fife.**  
**Hill: Edward Ewart, M.C.D., B.Arch. (L'pool), Wallasey.**  
**Hitch: John Stewart.**  
**Hitchcox: Brian Neil, Dipl.Arch. (Northern Polytechnic), Caterham.**  
**Hockney: (Miss) Nancy Pinder, Dip.Arch. (Nottm.), Newark.**  
**Hughes: Henry Richard, A.A. Dipl., New Hartford, Connecticut, U.S.A.**  
**Ingelbrecht: Douglas Marie Lucien.**  
**Knight: Kevin Francis, Hawthorn, Victoria, Australia.**  
**Lambert: John Brian, Dip.Arch. (Birm.), Stafford.**  
**Louw: Leslie Brink, B.A.(Arch.) (C.T.), Bellville, Cape Province, S. Africa.**  
**Low: Ah Long, B.Arch. (Melbourne), Singapore.**  
**McDonald: Donald Charles Hodgess, Dipl.Arch. (Northern Polytechnic), Woking.**  
**McGowan: David Keith, B.A.(Cantab), Birmingham.**  
**McKay: Reginald William, Artarmon, N.S.W., Australia.**  
**Mainstone: Keith Lowry, Bristol.**  
**Mark Brown: Peter, B.Arch. (Auck. N.Z.), Auckland, New Zealand.**  
**Martyn: Roy Bruce, Dipl.Arch. (Oxford), St. Helier, Jersey.**  
**Mathieson: Alexander John, Dipl.Arch. (Leeds), Leeds.**  
**Matthews: John Wick Kenyon, Bristol.**  
**Miller: Harry Preston, Dipl.Arch. (Leeds), Leeds.**  
**Mirkowski: Roman, Dip.Arch. (Manchester), Leicester.**

**Monson: John Edward, B.A. (Cantab.), Bushey.**  
**Morris: Alan Croft Faulkener.**  
**Murdoch: James Wilson Henry, Dip.Arch. (Abdn.), Macduff.**  
**Murphy: Gerald James.**  
**Newman: Geoffrey Colin, B.Arch. (Auck. N.Z.), Auckland, New Zealand.**  
**Norman: Frank George, Dipl.Arch. (Northern Polytechnic), Bushey.**  
**O'Connor: Kenneth Wille', B. Arch. (C.T.), Cape Town, S. Africa.**  
**Orpen: John Patrick Preston, Dipl.Arch. (Northern Polytechnic).**  
**O'Shea: Peter Denis, Dipl.Arch. (Northern Polytechnic).**  
**Patchitt: (Miss) Sheila Mary, B.Arch. (Rand), Johannesburg, S. Africa.**  
**Pennycook: Ian James, Dipl.Arch. (Leeds), Leeds.**  
**Phillips: Derek Reginald Higham, M.Arch. (Mass. Inst. Tech.), M.C.D., B.Arch. (L'pool), Market Drayton.**  
**Preston: (Mrs.) Mary Margaret (née Spokes), Dipl. Arch. (Oxford), Oxford.**  
**Pritchard: William, Dip.Arch. (Abdn.) Aberdeen.**  
**Pryor: Clarence Gandy, Launceston, Tasmania.**  
**Ridsdale-Saw: Benjamin Robert, Dipl.Arch. (Northern Polytechnic).**  
**Roberts: Brian Glyn, Bournemouth.**  
**Robertson: James Stewart, D.A. (Edin.), Edinburgh.**  
**Rowlands: John Dennis, Weybridge.**  
**Rozsa: Imre, Nairobi, Kenya.**  
**Scholtz: Tielman Johannes Roos, B.Arch. (Pretoria), Pretoria, S. Africa.**  
**Scrivins: Derek Cyril, Grantham.**  
**Shaw: Donnal Gavin, B.Arch. (Auck. N.Z.), Wellington, New Zealand.**  
**Shores: John Evelyn, Hull.**  
**Smith: Gordon, B.Arch. (Auck. N.Z.), Auckland, New Zealand.**  
**Smith: Raymond Gerald, A.A. Dipl.**  
**Stafford: (Mrs.) Christine Aline, M.A. (Cantab.), A.A. Dipl., Billingshurst.**  
**Stafford: Hugh John Widdrington, B.A. (Oxon.), A.A. Dipl., Billingshurst.**  
**Steinberg: John Barry, B.Arch. (Rand), Johannesburg, S. Africa.**  
**Stephen: Douglas Cruden, A.A. Dipl.**  
**Stirling: John, Dip.Arch. (The Polytechnic).**  
**Sturgis: Charles Timothy.**  
**Sumpster: David Brian, B.A. (Arch.) (Lond.), Reading.**  
**Taylor: Arthur Francis Kenneth, Dipl.Arch. (Northern Polytechnic).**  
**Thomas: Ernest Reginald John, Newton Aycliffe.**  
**Tribelhorn: Ferdinand Juan, B.A. (Arch.) (C.T.), Bellville, Cape Province, S. Africa.**  
**Turnbull: Gerald Anthony, A.A. Dipl.**  
**Turner-Davis: Bernard, M.C.D., B.Arch. (L'pool), Wellington.**  
**Walker: Phillip Royston, Portsmouth.**  
**Ward: Geoffrey Edward, Dipl.Arch. (Oxford).**  
**Waterhouse: (Miss) Prudence Mariabella, B.A. (Cantab.)**  
**Webb: Peter John, Dipl.Arch. (Northern Polytechnic).**  
**Willis: Geoffrey Ernest, Hove.**  
**Wilson: Francis Gordon, Wellington, New Zealand.**  
**Wilson: Michael, Worthing.**  
**Winch: Derek John, B.Arch. (L'pool).**  
**Wolff: Winston, B.Arch. (Pretoria), Pretoria, S. Africa.**  
**Wong: Alfred Hong Kwok, B.Arch. (Melbourne), Singapore.**  
**Woodburn: William James, Montmorency, Victoria, Australia.**  
**Wrightam: Eric Ernest, Dip.Arch. (Nottm.), Derby.**

AS LICENTIATES (4)  
**Berry: George William, Torquay.**  
**Clark: Harry Richard, Carlisle.**  
**Edgar: Stanley White, Edinburgh.**  
**Turner: George Henry, Grimsby.**

#### ELECTION: 2 NOVEMBER 1954

The following candidates for membership were elected on 2 November 1954.

#### AS FELLOW (1)

**Cook: Weymouth Keith, Dip.Arch. (Auck., N.Z.) [A 1932], Lower Hutt, New Zealand.**

#### AS ASSOCIATES (5)

**Archer: Christopher John, Dipl.Arch. (Oxford), Nairobi, Kenya.**  
**Eales: Keith Symmington, Brisbane, Queensland, Australia.**  
**Heller: Joseph, Ramat Gan, Israel.**  
**Pentland: William Thomas, B.Arch. (Toronto), Toronto, Ontario, Canada.**  
**Tudhope: John Robertson, B.Arch. (Rand), Rustenburg District, Transvaal, S. Africa.**

#### ELECTION: 7 DECEMBER 1954

An election of candidates for membership will take place on 7 December 1954. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 29 November 1954.

The names following the applicant's address are those of his proposers.

#### AS HON. FELLOW (1)

**Massey: The Right Hon. Vincent, C.H., Governor-General of Canada. Government House, Ottawa, Canada. Proposed by the Council.**

#### AS FELLOWS (35)

**Arnold: Raymond Charles [A 1919], Hanover Court, Hanover Square, W.1; 288 Perth Road, Ilford, Essex. A. R. F. Anderson, E. Forster, W. B. Stedman.**  
**Banks: Arthur Vivian, Dip.Arch. (Cardiff) [A 1927], Chief Staff Architect, Lloyds Bank Ltd., 71, Lombard Street, E.C.3; 'Fir Trees', 72 Fairdene Road, Coulsdon, Surrey. S. F. Bestow, T. M. Wilson, B. F. Pennells.**  
**Campbell: Noel Evans [A 1946], Education Offices, New Row, Coleraine, N. Ireland; 6 Bath Street, Portrush, Co. Antrim. R. S. Wilshire, A. F. Lucy, J. H. Swann.**  
**Cave: Reginald William, Dipl.Arch. (U.C.L.) [A 1937], The Oxford School of Architecture and Building, Cowley Place, The Plain, Oxford; 23 Beech Croft Road, Oxford. Prof. A. E. Richardson, Joseph Addison, David Beecher.**  
**Davy: Geoffrey, Dipl.Arch. (Leeds) [A 1936], Messrs. Kitson, Parish Ledgard and Pyman, Lloyds Bank Chambers, Vicar Lane, Leeds; 39 Hookstone Chase, Harrogate. Noel Pyman, W. A. Ledgard, W. H. King.**  
**Duke: George Clifford, A.A. Dipl. [A 1934], 111 Haverstock Hill, N.W.3; 109 Haverstock Hill, N.W.3. Thomas Bilbow, R. J. Duke, S. R. Pierce.**  
**Edwards: Kenneth Drew [A 1920], 53 Regent Road, Leicester; 11 Wakerley Road, Evington, Leicester. G. A. Cope, T. W. Haird, F. H. Jones.**  
**Elson: Cecil Harry [A 1939], 44 Catherine Place, Westminster, S.W.1; 36 Cyril Mansions,**

Prince of Wales Drive, Battersea, S.W.11. T. E. Scott, F. R. S. Yorke, Sydney Tatchell.

**Gray: Percy** [A 1946], Norfolk House, Norfolk Street, W.C.2; 30 Fife Road, East Sheen, S.W.14. L. A. Culliford, S. H. J. Roth, L. A. Chackett.

**Gregory: Lionel Eric**, Dipl.Arch. (L'pool) [A 1940], 9 Parkstone Road, Poole, Dorset; Redmoor Hall, De Maulley Road, Canford Cliffs. R. A. Phillips, L. M. Austin, A. J. Seal.

**Habershon: Alfred Eustace** [A 1890], 24 Hythe Road, West Worthing, Sussex. Applying for nomination by the Council under Bye-law 3(d).

**Hunt: Vincent Collingwood** [A 1927], The Corporation of London, 55/61 Moorgate, E.C.2; 13 Shottfield Avenue, East Sheen, S.W.14. Michael Waterhouse, D. H. McMorran, A. H. Powell.

**Lipski: Louis L.**, A.A.Dipl. [A 1948], 9 Blacklands Terrace, S.W.3. R. D. Scott, A. W. Kenyon, C. L. Gill.

**Nealson: Kenneth**, A.R.I.C.S. [A 1936], 28 Orchard Street, Bristol, 1; 154 Redland Road, Bristol, 6. E. H. Button, Lieut.-Col. Eric Cole, J. R. Edwards.

**Pooley: Frederick Bernard**, F.R.I.C.S., A.M.T.P.I. [A 1940], County Architect, Buckinghamshire County Council, County Offices, Aylesbury, Bucks; The Camp, Little Kimble, Aylesbury. Basil Spence, W. D. Hartley, H. J. Stribling.

**Powell: Harold Hamilton**, B.Arch. (L'pool) [A 1930], Room 105, British Railways, Eastern Region, King's Cross, N.1; 'The Gable', St. Albans Road, Ventnor, Isle of Wight. A. N. Thorpe, C. H. Aslin, F. H. Crossley.

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**Clavering: John Cecil**, Ministry of Works, London; 'Callaly', Hayes Lane, Kenley, Surrey. Sir Charles Mole, C. G. Mant, A. C. Hopkinson.

**Harmer: Frederick George**, Leeds Regional Hospital Board, Park Parade, Harrogate; 'Greenholme', Harrogate Road, Rawdon, Yorks. Richard Mellor, W. H. King, Colonel R. B. Armistead.

**Thurley: Cyril Frederick James**, 51 Hyde Road, Paignton; 7 Parkhill Road, Torquay; Wynne House, Old Torwood Road, Torquay. Vyvyan Salisbury, John Bennett, J. A. Powell.

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**Vickery: Kenneth Percy**, Hill Street, Trowbridge, Wilts; Daneswood, Limpley Stoke, near Bath, Somerset. Terence Carr, Anthony Medlycott and applying for nomination by the Council under Bye-law 3(d).

and the following Licentiates who are qualified under Section IV, Clause 4(c) (ii) of the Supplemental Charter of 1925:—

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**Seddon: Ernest Geoffrey**, Dip. Arch. (Manchester) (Victoria Univ. Manchester: Sch. of Arch.), 9 Manley Road, Sale, Manchester. Prof. R. A. Cordingley, E. S. Benson, Prof. Clifford Holliday.

**Shelley: John Brian**, Dip. Arch. (Birm.) (Birmingham Sch. of Arch.), 30 Hill View Road, Basingstoke, Hants. A. Douglas Jones and applying for nomination by the Council under Bye-law 3(d).

**Shewan: Denis Michael** Alastair, Dip. Arch. (Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 45 Queen's Road, Aberdeen. E. F. Davies, G. A. Mitchell, A. G. R. Mackenzie.

**Singleton: Peter** [Special Final], 13 Old Park View, Enfield, Middlesex. Louis de Soissons, Kenneth Peacock, J. K. Robertson.

**Slade: Harry Gordon**, Dipl. Arch. (U.C.L.) (Bartlett Sch. of Arch.: Univ. of London), 'Oddways', Butleigh, Glastonbury, Somerset. G. A. Crockett, S. Hyde, D. du R. Aberdeen.

**Snow: Thomas Anthony** (Arch. Assoc. (London): Sch. of Arch.), 14 St. George's Road, Bedford. H. G. Goddard, R. F. Jordan, Arthur Korn.

**Sowerbutts: Ernest William**, B.A. (Arch.) (Sheffield) (Univ. of Sheffield, Dept. of Arch.), 1 Alstead Avenue, Hale, Cheshire. Prof. Stephen Welsh, H. B. Leighton, H. B. S. Gibbs.

**Stanley: Robert Fredrick** [Special Final], Innisfree, Queensway, Lisburn Road, Lambeg, Belfast, N. Ireland. T. W. Henry, R. H. Gibson, E. D. Taylor.

**Steel: Donald William** (Arch. Assoc. (London): Sch. of Arch.), High Bank, Hartfield, Sussex. Arthur Korn, H. G. Goddard, R. F. Jordan.

**Stephens: Peter** [Final], 6A Wyndham Place, W.1. P. G. Freeman, M. K. Matthews, A. Y. Mayell.

**Stimson: St. John Perrot**, Dip. Arch. (Leics.) (Leicester Coll. of Art and Tech.: Sch. of Arch.), The Hollies, Leicester Road, Narborough, near Leicester. T. W. Haird, S. Penn Smith, Albert Herbert.

**Stokes: Raymond Dennis** [Final], c/o 97 Grosvenor Avenue, East Sheen, Surrey. J. M. Scott, Sir Thomas Bennett, R. Hellberg.

**Stone: Rodney Michael**, Dip. Arch. (The Polytechnic) (The Poly., Regent Street, London: Sch. of Arch.), 448 Upper Richmond Road, Putney, S.W.15. J. S. Walkden, J. Holman, David Jenkin.

**Swanston: Iain Wattie**, Dipl. Arch. (U.C.L.) (Bartlett Sch. of Arch.: Univ. of Liverpool), 15 Hawkhurst Way, West Wickham, Kent. Prof. H. O. Corfiato, Thomas Ritchie, R. C. White-Cooper.

**Thomas: Geoffrey James** [Final], 16 Shepherd Lane, Guildford, Surrey. R. D. Scott, Brian O'Rorke, N. D. Quick.

**Thomson: Ian Manson**, Dip. Arch. (Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 16 Hilton Avenue, Aberdeen. E. F. Davies, A. B. Gardner, J. G. Marr.

**Turner: David Donald** (Arch. Assoc. (London): Sch. of Arch.), 102 High Street, Ware, Herts. Prof. Basil Ward, F. R. S. Yorke, Arthur Korn.

**Valkenburg: Bastiaan** [Special Final], 84a Westbourne Terrace, W.2. Louis de Soissons, Kenneth Peacock, D. M. Hodges.

**Vercelli: Peter John Biagio**, B.A. (Arch.) (Lond.) (Bartlett Sch. of Arch.: Univ. of London), 5 Dulverton Mansions, Gray's Inn Road, W.C.1. Prof. H. O. Corfiato, R. C. White-Cooper, T. E. Heysham.

**Watkinson: Peter Albert** [Special Final], 23 Belmont Road, Reigate, Surrey. D. W. Clark, R. J. Sparrow, R. J. Page.

**Watson: James**, D.A. (Dundee) (Dundee Coll. of Art: Sch. of Arch.), 24 Burnside Terrace, Anstruther, Fife, Scotland. John Needham, T. H. Thoms, A. D. Haxton.

**West: Bernard Billing** (Bartlett Sch. of Arch.: Univ. of London), 1 Pond Square, Highgate, N.6. G. A. Crockett, S. Hyde, D. du R. Aberdeen.

**Whittaker: Peter David**, B.A. (Arch.) (Lond.) (Bartlett Sch. of Arch.: Univ. of London), 2 Mill Hill Road, Barnes, S.W.13. Prof. H. O. Corfiato, Thomas Ritchie, R. C. White-Cooper.

**Wilde: Ronald George** [Special Final], c/o D. S. Thomson, 'Lyons', East Street, Tonbridge, Kent. K. E. Black, S. H. Tiltman, F. F. Howard.

**Wiles: Harold Gardner** [Special Final], 19 Park Drive, East Sheen, S.W.14. C. D. Andrews, C. G. Stillman, R. T. Grummant.

**Wilkinson: Thomas Denis**, Dipl. Arch. (U.C.L.) (Bartlett Sch. of Arch.: Univ. of London), Sally Gap, Innham Wood, Crowborough, Sussex. Prof. H. O. Corfiato, Thomas Ritchie, R. C. White-Cooper.

**Wood: Peter Russell** (Arch. Assoc. (London): Sch. of Arch.) 11 Coulson Street, Chelsea, S.W.3. Henry Goddard, R. F. Jordan, Arthur Korn.

**Yellowlees: Benjamin Valentine Ingram** [Special Final], Midlothian County Council, Architect's Department, 32 Palmerston Place, Edinburgh. 12. A. A. Foote, J. R. McKay, W. H. Kininmonth.

**Young: James Child Allendale** [Final], 54 Trajan Avenue, South Shields, Co. Durham. S. W. Milburn, F. H. Newrick, E. W. Blackbell.

## ELECTION: 1 MARCH 1955

An election of candidates for membership will take place on 1 March 1955. The names and addresses of the overseas candidates, with the names of their proposers, are herewith pub-

lished for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday 12 February 1955.

The names following the applicant's address are those of his proposers.

#### AS FELLOW (1)

**Robson: Christopher Elic** [A 1947], 'Gleneagles', Kings Crescent, Salisbury, Southern Rhodesia; 'Dunelm', 22 Second Avenue, Mabelreign, Salisbury, S. W. Milburn, F. H. Newrick, E. W. Blackbell.

#### AS ASSOCIATES (7)

**Asarpota: Laxmichand Dhamanmal** [Special Final], Ellis Bridge, Ahmedabad 6, India. Norman Keep and applying for nomination by the Council under Bye-law 3(d).

**Craig: Noel**, Dip.Arch. (C.T.) [Passed a qualifying Exam. approved by the I.S.A.A.], Sandringham C.50, Beach Road, Mouille Point, C.P., S. Africa. Prof. L. W. T. White, O. Pryce Lewis, H. L. Roberts.

**De Beer: Philip Richard Geoffrey**, B.Arch. (C.T.) [Passed a qualifying Exam. approved by the I.S.A.A.], 716 Leisk House, Cnr. Rissik and Bree Streets, Johannesburg, S. Africa. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(d).

**Gluckman: Michael**, B.Arch. (C.T.) [Passed a qualifying Exam. approved by the I.S.A.A.], 716 Leisk House, Cnr. Rissik and Bree Streets,

Johannesburg, S. Africa. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(d).

**Mackenzie: Keith Hamilton**, Dip.Arch. (Auck. N.Z.) [Passed a qualifying Exam. approved by the N.Z.I.A.], c/o Messrs. Pascoe, Hall and Mackenzie, 63 Cathedral Square, Christchurch, New Zealand. Prof. C. R. Knight and the President and Hon. Secretary of the New Zealand Institute of Architects under Bye-law 3(a).

**Parker: Howard Clifford**, B.Arch. (C.T.) [Passed a qualifying Exam. approved by the I.S.A.A.], c/o Messrs. Farrow, Stocks and Farrow, N.B.S. Building, Terminus Street, East London, S. Africa. Prof. L. W. T. White, O. Pryce Lewis and applying for nomination by the Council under Bye-law 3(d).

**Peters: James Seaton**, B.Arch. (C.T.) [Passed a qualifying Exam. approved by the I.S.A.A.], 716 Leisk House, Cnr. Rissik and Bree Streets, Johannesburg, S. Africa. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3(d).

#### AS LICENTIATES (2)

**Millar: David**, c/o Messrs. Pallett and Price, P.O. Box 272, Salisbury, Southern Rhodesia; 8 Alberta Road, Braeside, Salisbury. Proposed by W. F. Hendry, C. A. Knight, L. F. R. Coote.

**Zarb: Arnold**, 7 Rue de la Haye, Casablanca, French Morocco; 36 Chatsworth Court, Pembroke Road, London, W.8. Applying for nomination by the Council under Bye-law 3(d).

ment appointment. He designed buildings in Pretoria, Windhoek, Bloemfontein and Port Elizabeth, the principal of them being the English Church, Windhoek.

**Septimus Charles Hanson** [Retd. L] died on 18 July, aged 72.

Mr. Hanson was for twenty-five years Assistant Director of Public Works, Nigeria.

**Frederick John Osborne Smith** [Retd. F] died on 19 June, aged 79.

Mr. Smith served his articles with his father, Mr. J. Osborne Smith [F], in Westminster, and studied at the Architectural Association School of Architecture. In association with his father he designed a number of schools, mainly grammar and high schools, in the London area and elsewhere. He was also in the early part of his career much interested in sanitary engineering and read several papers on this subject both at the R.I.B.A. and the Royal Sanitary Institute.

In 1912 Mr. Smith went to Canada and was employed from 1913 to 1920 in the Architects' Branch of the Department of Public Works, Ottawa, where he was in charge of the sanitation, drainage, plumbing, water supply and sewage disposal for military hospitals and other public works. He later returned to England and, after some years with various firms of private architects, took up an appointment in the County Architect's Department, Hertfordshire.

**Jack Lawrence Lambert** [A] died on 26 July, aged 50.

Mr. Lambert qualified at Sydney Technical College and worked between 1926 and 1939 as assistant in New South Wales firms and to Sir Aston Webb in England. He served during the war in the R.E. in England and India, holding the rank of Lieutenant-Colonel, and after the war became a partner in the firm of Cobb, Archer and Scammell, Nairobi. Mr. Lambert's architectural work covered a wide range, including a hospital and residences for the ill-fated groundnuts scheme, banks, flats, houses and stores in Tanganyika, Australia and England, but his speciality in all three was flats, and in Switzerland crematoria.

Mr. R. S. Cobb, M.C. [F], writes of his late partner: 'He was a man of outstanding ability and energy who was responsible for and had at the time of his death just completed the design for the New National Bank of India premises in Dar-es-Salaam and was the responsible architect for buildings in almost every part of Tanganyika. His illness began in April 1953 when he was ordered a holiday in South Africa, but although in poor health on his return he continued his work until two days before his death when his heart was unable to meet the strain which he placed upon it. His loss will be felt greatly by his professional friends and partners in East Africa, England and Australia.'

**Frederick Willey** [F], died on 15 September, aged 73.

Mr. Willey served his articles with Mr. William Hepper [F] and in 1911 joined the architectural staff of Durham County Council. Here he rose by 1920 to Chief Architect. After his retirement from the Council's employment he carried on private practice, and at the time of his death was associate architect, with S. W. Milburn and Partners, on Stainsby Schools, Middlesbrough. Mr. Willey always specialised in school work and was particularly well known for his low cost designs.

## Obituaries

**Benjamin Price Davies, F.R.I.C.S., M.T.P.I. [F]**, Dist. T.P., died on 12 September, aged 66.

Benjamin Price Davies was born at Fishguard. His father and grandfather were small building and public works contractors and were responsible for the Fishguard sea wall of 1882. When Price Davies was a boy, however, his family moved to the mining valleys of Glamorgan. Price Davies left school at 13 and went to work. He was employed first in housing maintenance work in connection with colliery properties and later, for two years, in a colliery smith shop and foundry. At sixteen he turned to the family business and began to study all aspects of the building trade.

He saw four years' service in the first world war in the R.E., both in the ranks and as an officer. In 1919 he joined the staff of Cardiff Corporation and began to study part time at Cardiff Technical College, with a view to his future career as surveyor and architect. Later he became a part-time assistant lecturer. In 1923 he became Surveyor of Works, Cardiff, and in 1929 moved to Bangor as City Engineer and Architect. This post he held until 1944.

Mr. Davies was a prolific and successful technical writer, his best-known book being *Estimating for Buildings and Public Works*. This was first published in 1922 under the title *The Building Estimator*, and has run to twelve editions. In 1922 the system of estimating advocated by Mr. Price Davies was entirely new. Other books by him are *Specification for Houses, Pricing and Costing, Specifications for Buildings and Public Works*, and a novel of the South Wales valleys, *They Made a People*. He also contributed a number of papers to the technical Press.

During the time that he was City Engineer of Bangor, Mr. Davies was responsible for a

large programme of housing and road improvements, being responsible in all for the construction of 800 new houses and the clearance of about 500 slum properties. He was a great advocate of a more direct road between North and South Wales. After his retirement he supervised the demolition, with voluntary and unskilled labour, of the old Peniel Baptist Chapel, and designed the new one, not only as a place of worship but as an institutional building. Mr. Davies was a deacon of the chapel and a keen social worker.

Mr. T. Alwyn Lloyd, LL.D., P.P.T.P.I. [F], writes of his old friend: 'Price Davies had a forceful and amiable personality, and always gave of his best to all the tasks undertaken. He will be greatly missed among a large circle of friends in North and South Wales.'

**Percy George Bridge** [L] died on 2 February, aged 62.

Mr. Bridge held employment with several firms, including at one period Messrs. Courage & Co. Ltd., for whom he built several new public houses. He also carried out work for the National Dock Labour Board. In 1952 he went into private practice, in partnership with Mr. J. F. Kennedy [L], who now carries on the practice under the style of Bridge & Kennedy.

**Robert Allen Fordham** [Retd. L] died on 14 February, aged 91.

Mr. Fordham practised for successive periods at Windsor, Aberdeen, Peterborough and Cambridge. He specialised in church work and the restoration of old buildings, and was at one time Diocesan Surveyor for Peterborough.

**George Sydney Herbert Bradford** [Retd. A] died on 11 August, aged 71.

Mr. Bradford served his articles in Dublin, then went to S. Africa and took up a Govern-

# Members' Column

*This column is reserved for notices of changes of address, partnership and partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.*

## APPOINTMENTS

**Mr. Thomas A. Barber** [A] has been appointed Resident Engineer and Surveyor to the University College of the Gold Coast, Accra, West Africa, and will be pleased to receive trade catalogues, etc., at that address.

**Mr. Philip J. Price**, who resigned his former post as Chief Architect, Government of Trinidad and Tobago, is now Departmental Architect (Asian and South American Zones), Department of External Affairs, Government of Canada, Ottawa, Ontario, Canada.

## PRACTICES AND PARTNERSHIPS

**Mr. Michael G. Ballard** [A] and **Mr. Ivor W. Beese** [A] have entered into partnership and are practising under the name of **Ballard and Beese** at 34 St. Giles, Oxford, where they will be pleased to receive trade catalogues, etc.

**Mr. Victor Bloom** [A] has begun practice at Fazal Manzil, Allum Lane, Elstree, Herts. (Elstree 1487).

The partnership of **de Metz & Birks** [FF] has been dissolved by mutual agreement. **Mr. Morris de Metz** will continue to practise from 2 Ludgate Hill, E.C.4, and **Mr. Theo. H. Birks** will practise from 38 Portland Place, W.1, where he will be pleased to receive trade catalogues, etc.

**W. Dobson Chapman and Partners** of Macclesfield have now taken over the practice carried on until his recent retirement by **Mr. Arthur Clayton** [F] at Macclesfield and Manchester. The Macclesfield practice will be carried on at Messrs. W. Dobson Chapman and Partners' present address at Jordangate House, Macclesfield (Macclesfield 2278/9). The Manchester practice will be carried on at 4 Clarence Street, Manchester 2, until 1 December, when it will be transferred to 3 St. James's Square, Manchester 2 (Blackfriars 9904).

**Mr. John Farrar** [A] has begun practice at 257 Church Street, Blackpool, where he will be pleased to receive trade catalogues, etc.

**Mr. Douglas Hilton** [A] has terminated his partnership in the firm of Forsyth Lawson, Cunningham and Partners and will be practising under his own name at 27 High Street, Swindon, where he will be pleased to receive trade catalogues, etc.

**Mr. Arthur Lindsay** [A] has relinquished his post as Architect to the Department of Housing, Accra, and has begun private practice at the following address: P.O. Box 1343, Accra, Gold Coast, West Africa.

**Mr. Ivor Shaw** [F] has resumed practice in London at 57 Blandford Street, W.1 (WELbeck 5113), where he will be pleased to receive trade catalogues, etc.

**Mr. Arthur Swift** [A] has relinquished his appointment as Senior Architect with the Ministry of Works and is now in practice as **Arthur Swift and Partners** at 17 Fitzhardinge Street, Portman Square, London, W.1, and at 1 Duke Street, Manchester Square, London, W.1. Trade catalogues will be appreciated.

**Mr. D. W. Tucker** [A] has taken over the practice of the late **Mr. L. M. Evans** [F]. The practice will be continued from the same

address under the name of **D. W. Tucker**, Lloyds Bank Chambers, 38 High Street, Loughborough.

**Mr. A. S. Waring** [A] has begun practice at 36 Jesmond Road, Newcastle upon Tyne 2 (Newcastle 81/1856), where he will be pleased to receive trade catalogues, etc.

**Mr. John O. Webb** [A] is entering into private practice at 20 Dumfries Place, Cardiff, where he will be pleased to receive trade data, catalogues, samples, etc.

## CHANGES OF ADDRESS

**Mr. James H. A. Baker** [A] has changed his address to 8 Sweetcroft Lane, Hillingdon, Middx. (Uxbridge 2241).

**Mr. C. H. Barnett** [A] has moved to 270 The Hides, Neteswell, Harlow, Essex, having taken up an appointment with the Harlow Development Corporation.

**Mr. J. M. Clarke** [A] has relinquished his appointment as Regional Technical Information Officer with the Ministry of Works and his address is now 2 Pentley Park, Welwyn Garden City, Herts.

**Mr. A. O. Cole** [A] has moved to new offices at 14 Downing Street, Cambridge, where he will continue to practise under his own name.

**Mr. Hugh Creighton** [A] has changed his address to Orchard House, Stanford-in-the-Vale, Faringdon, Berkshire (Stanford-in-the-Vale 320).

**Mr. Adam Gelister** [A] has moved his Enfield office to 42 South Molton Street, London, S.W.1 (MAYfair 3506), where he will be pleased to receive trade catalogues, etc.

**Mr. J. Alan Haddy** [F], Senior Lecturer at the City of Liverpool College of Building, will be pleased to receive trade catalogues at the College, Clarence Street, Liverpool 3.

**Mr. Kenneth E. Hammond** [A] has removed to 'Freemans', Pound Lane, Great Billing, Northamptonshire.

**Mr. D. S. Hogben** [A] has changed his address to 59 Callary Road, Mount Merrion, Dublin.

**Mr. Hugh M. Hughes** [A] has moved to 39 Geoffreyroy Road, Caversham Heights, Reading, Berks, having taken up an appointment with the County Borough of Reading Architects' Department.

**Mr. Francis Osler** [A] has now moved to 18 High Street, Alton, Hants, and will continue his practice from that address.

**Mr. F. Potter** [F] has opened an additional office at 163 High Street, Kings Heath, Birmingham 14 (HIGHbury 3293).

**Mr. Robert S. Shaw**, V.R.D., A.M.T.P.I. [A], formerly of 402 Bitterne Road, Southampton, has removed to a new office at 132A High Street, Southampton (21015).

**Mr. John H. Snowden** [A] has changed his address to 1 Woodleigh Avenue, Upton Heath, Chester. He has taken up an appointment with the County Architect's Department, The Castle, Shipgate Street, Chester.

## PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate (39) returning to U.K. from abroad in December wishes partnership or post leading thereto in south or south-east England. Varied experience at home and abroad. Some capital available. Box No. 85, c/o Secretary, R.I.B.A.

Associate, M.A.(Cantab.), M.T.P.I., aged 47, with wide connections in Kent, seeks partner-

ship or would consider purchasing established practice. Capital available. Box 111, c/o Secretary, R.I.B.A.

**Fellow**, A.M.T.P.I. (38), with own established practice near Birmingham, wishes to amalgamate with older member in Birmingham near retiring age, with a view to expanding the city practice. Older member would retain on retirement share of profits during lifetime. Box 112, c/o Secretary, R.I.B.A.

Associate requires partnership or responsible post leading thereto. Bristol or coastal belt Hants-Devon. 35 years' varied experience, including private practice, local government and civil service. Small capital available. Box 116, c/o Secretary, R.I.B.A.

## WANTED AND FOR SALE

Wanted. A portable plane-table and tripod suitable for use with a telescopic alidade. Box 114, c/o Secretary, R.I.B.A.

For sale. One set six boxwood survey scales with offsets in mahogany case, £1 10s. Centrolinead, Nicholson's, for perspective drawing, £2 2s. *Domestic Architecture of England During the Tudor Period*, Garner and Stratton, 2 vols., £4 4s. *English Homes*, Period II, Vol. I, Early Tudor 1485-1558, by H. Avray Tipping, £1 10s. Can be inspected any time in London. Box 113, c/o Secretary, R.I.B.A.

For sale. Drawing machines in good condition—five Antiquarian size, three Double Elephant size. Seven 4-ft. fluorescent tubes and white plastic shades complete with fittings. Box 115, c/o Secretary, R.I.B.A.

## MISCELLANEOUS

**Mrs. Ruth Millar** (née Curwen) [A] is now **Mrs. Ruth Lowy** of 19 Chlorine Gardens, Belfast.

**Mr. Keith Neighbour** [A], who qualified at the University of Adelaide, South Australia, in 1952 and was awarded the degree B.E. (Adelaide), has recently been awarded the degree of M.Arch. at the University of Pennsylvania, U.S.A. Mr. Neighbour's permanent address is 55 Barton Terrace, North Adelaide, South Australia. His temporary address in this country is c/o The National Bank of Australia, Australia House, Strand, London, W.C.2.

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